6-2004

Eating Ethnicity: Examining 18th Century French Colonial Identity Through Selective Consumption of Animal Resources in the North American Interior

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EATING ETHNICITY: EXAMINING 18TH CENTURY FRENCH COLONIAL IDENTITY THROUGH SELECTIVE CONSUMPTION OF ANIMAL RESOURCES IN THE NORTH AMERICAN INTERIOR

by

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A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Master of Arts
Department of Anthropology

Western Michigan University
Kalamazoo, Michigan
June 2004

ACKNOWLEDGMENTS

I would like to acknowledge the numerous individuals who have provided advice and support for this project. I would like to thank Dr. Michael S. Nassaney, my thesis advisor and chairperson, for his suggestions and patience throughout this research. A special thanks to Dr. Terrance J. Martin, Curator of Anthropology at the Illinois State Museum, for granting access to the faunal collections housed at the Illinois State Museum's Research and Collections Center, providing guidance in the methods of faunal analysis, and for opening his home to me as a guest during the course of this research. The many trips to Springfield would not have been feasible without this added kindness from the Martin Family. My thanks go out to the other members of my thesis committee, Dr. William Cremin and Dr. Michael Chiarappa, for their enthusiasm and open mind concerning this project. Additionally, I would like to thank Support the Fort Inc., the Fort St. Joseph Museum, and the participants of the 2002 Western Michigan University archaeological fieldschool whose efforts resulted in the Fort St. Joseph specimens used in this analysis. Brock Giordano and Daniel Lynch receive special thanks for the many hours of conversation and information sharing that have led to the ideas presented in this thesis. Finally, I would like to express my deepest gratitude to my wife Elizabeth Becker and my parents Harley and Jackie Becker for their continued support throughout this project. All interpretations of the data and any shortcomings or deficiencies found in this work remain the sole responsibility of the author.

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Cultural identities can be created and maintained through daily practice and food consumption is one such practice. People need food in order to survive, but the types of food they eat are largely determined by the interaction of culture and their environment. By approaching the topic of subsistence practices as being culturally constituted, the study of foodways provides an avenue to examine issues of cultural identity through selective consumption. Eating certain foods to the exclusion of others is one method for establishing social distance between peoples and is simultaneously a reflection of this relationship and the types of interactions that take place between groups. This study explores the issue of cultural identity as expressed through selective consumption of animal resources. The outpost known as Fort St. Joseph will serve as an example of how one can utilize animal exploitation patterns to determine selective consumption and these results are compared to animal exploitation patterns at Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III. Variation in these patterns suggests the different ways in which cultural identities were expressed at each site.

TABLE OF CONTENTS

Table of Contents—continued

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The creation and maintenance of cultural identity can be realized through daily practices (Meskell 2002). Language, clothing, and personal adornment can all be utilized as markers of cultural identity. In addition, food types are largely determined by resource availability and cultural preference and as such, subsistence is a cultural practice that can be manipulated to create and reproduce social boundaries (Meigs 1988). By approaching the topic of subsistence practices as being culturally constituted, the study of foodways provides an avenue to examine issues of cultural identity through selective consumption. Cultural norms and mores, health issues, personal preferences, and religious beliefs can all influence a person's diet and so, too, can the conscious effort to distinguish oneself from members of another group (Beoku-Betts 1995; Ferguson and Zukin 1995). The cultural practice of eating certain foods serves to create and maintain perceived boundaries or cultural distinctions that act to identify members of one group from another. Through these markers people can position themselves in relation to other groups and reify their own cultural identity.

Eating certain foods to the exclusion of others is one method for establishing social distance between two peoples and is simultaneously an expression of this relationship and indicates the types of interactions that take place between the groups (Messer 1984). Subsistence patterns that are dissimilar between groups that share a

similar set of available resources indicate socio-cultural factors that influence foods chosen for consumption as opposed to environmental constraints. As such, social interaction between the groups can be examined through similarities or variations found in the subsistence patterns of different groups.

This study will explore the issue of cultural identity as expressed through selective consumption of animal resources for Europeans and Native Americans at five French colonial sites in North America. The American frontier in the 18th century provides a context for examining two groups of people with different cultural practices and world views. Values and meanings held by both groups were being challenged through what White (1991) calls a process of "mutual accommodation" and this creolization creates a framework for studying the types of interactions that may have been taking place. Warfare and sexual relations provide unique examples of interactions that reflect the attitudes of different peoples towards one another (White 1991). In the instance of the fur trade, violence breaks down trade networks and indicates the two peoples are sharing little in the way of mutual accommodation. However, inter-marriages between groups strengthen trade through the establishment of kinship ties between peoples (White 1991). This not only facilitated access to furs, but also increased personal safety through alliances. An informal relation such as marriage draws people together and reduces social distance while warfare breaks down cultural interaction and maintains social distance (Sleeper-Smith 2001).

One such place where cultural interaction and creolization between French colonists and Native Americans in the Great Lakes fur trade may be examined is the

rural outpost known as Fort St. Joseph. This site will serve as an example of how one can utilize animal exploitation patterns to determine selective consumption. Fort St. Joseph, located in present day Niles, Michigan, was a remote outpost that was not a governmental center for New France nor was it subject to a strong military presence (Hulse 1981). It was, however, a valuable trade outpost situated at the St. Joseph-Kankakee River portage where trade with local native groups flourished for nearly one hundred years. The results of the analysis of animal remains from this site will be compared to animal exploitation patterns at locations that occupy a similar environmental setting to Fort St. Joseph, but display differences in importance to the French government, function in the fur trade, and demographic make-up. Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III will serve as the basis for comparison with Fort St. Joseph. Fort Ouiatenon was the most similar of these four communities to Fort St. Joseph in terms of both size and social setting (Tordoff 1983). French Cahokia was an agricultural community located near the larger governmental center of Fort de Chartres I, and later Fort de Chartres III, along the Mississippi River. These sites experienced more stringent governmental control, a stronger military presence, and increased social stratification than did Fort Ouiatenon and Fort St. Joseph (Tordoff 1983, Wise 2001). Variation in the animal exploitation patterns may lend insight into the different ways cultural identity and European/Native American interaction was expressed at each of these locations through the maintenance of social distance.

It is hypothesized that as the Europeans interacted more intensively with local Native populations in rural areas, patterns of animal exploitation for the colonists may have tended to mimic those of their Native allies more so than in larger or more accessible locations. The larger colonial sites that experienced stronger governmental control and an increased military presence also had greater access to imported European goods such as domesticated animals. Wild game species would have been just as plentiful in these locations; however colonists in the larger forts may have continued to prefer domestic species for consumption. Daily life at a regional distribution center (Tordoff 1983) would not necessarily be dependent on the aid of Native allies and so interaction between the two groups would have been more formal and the cultural identities of colonists and Natives more rigidly defined. This creates social distancing that may be reflected in the animal exploitation patterns that served to maintain more discrete cultural identities. The interactions between Europeans and Natives at outposts on the fringes of the frontier may have had an air of informality as the daily needs of colonists, both social and economic, were dependent on cooperation with local tribes (Sleeper-Smith 2001; White 1991).

Specifically, this study seeks to compare animal exploitation patterns at the recently excavated Fort St. Joseph with animal remains collected from several other contemporaneous sites in the North American interior to examine variation in the subsistence strategies of the occupants. Number of Identified Specimens (NISP), Minimum Number of Individuals (MNI), and biomass estimates made from the faunal assemblages recovered from each of these sites will provide an ordinal ranking of

species consumed at each location. Of major concern will be the dependence on domesticated animals in comparison to wild game species, specifically white-tailed deer, in an effort to identify markers of European cultural identity as expressed through subsistence. Relations between colonists and Natives are proposed to have been more formal at sites with a distinct military presence, strong governmental control, and increased internal social stratification such as Fort de Chartres. Colonists relied on domesticated species out of cultural practice and this served as a means of maintaining social distance and clear lines of cultural identity between themselves and the Native tribes. However, moving away from governmental centers results in more informal relations with local Native peoples (White 1991) and as such the distinctions between Europeans and Native Americans become blurred. Increased inter-marriages that took place between Europeans and Natives at these locations and the presence of *métis* populations may be expressed in the animal exploitation patterns. An increase in the dependency on wild game species at the rural outposts is expected as a response to a relaxing of the desire to maintain cultural and social distance while larger governmental centers are expected to exhibit higher proportions of domesticated species reflecting more formal relationships between colonists and Natives at these sites.

In Chapter 2, I examine the literature concerning the construction of cultural identity through the selective consumption of foods. Also, archaeological investigations into issues of identity will be highlighted. Chapter 3 explores historical and archaeological evidence for animal resources in the area of southwestern

Michigan that would have been available to colonists at Fort St. Joseph during the 18th century. The history, environmental, and social conditions for each of the five sites will also be presented. Chapter 4 provides the methodology for this research and details excavation and recovery procedures at the Fort St. Joseph site (20BE23) during the 2002 field season. Chapter 5 presents the results of the analysis of the faunal remains from the Fort St. Joseph site, and Chapter 6 compares these results to Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III. Finally, Chapter 7 summarizes this research and suggests additional questions that may be explored.

CHAPTER II

LITERATURE REVIEW

This chapter explores some of the literature concerning cultural identity as expressed through foodways in both contemporary and past societies. Ethnographic studies provide examples of the manner in which selective consumption may be employed by certain groups to differentiate peoples (Holtzman 2003). The interactions between groups of people who actively maintain discrete cultural identities may then be examined through the subsistence practices of those people. The material remains from meals, such as the faunal assemblage recovered from Fort Michilimackinac, can also be examined in order to identify variation in the types of subsistence that was practiced by various occupants of a site (Cleland 1970; Scott 1985). These differences may indicate markers of cultural identity for the colonists who were present.

To begin a discussion on the expression of cultural identity through selective consumption, definition of these terms is necessary. For the purposes of this study, cultural identity is defined as the creation, manipulation, and continuation of markers, be they verbal or non-verbal, that are utilized to distinguish one culturally "distinct" group from another (Craib 1992; Shennan 1994). There are three aspects that complicate the definition of identity, be it cultural, social, or otherwise: (1) identity is situational and often context dependent, (2) identity can change quickly during the course of an interaction, and (3) interactions with members of another culture are

often influenced by one's own position within society (Bourdieu 1977; Mann 1999; Messer 1984; Wise 2001). The above definition of cultural identity was formulated with these concerns in mind. Cultural identity may be expressed through many forms of material culture (Shennan 1994) and this research focuses on the study of foodways and how subsistence practices may be manipulated as a marker of cultural identity. As such, selective consumption in this study refers to a literal understanding of the term that implies the exploitation of certain animals to the exclusion of others (Gust 1993; Messer 1984).

The idea that consumption practices can be utilized as a marker of cultural identity has found fertile soil in the work of ethnographers. Subsistence patterns have often received a place of prominence in the identification of cultural practice along side such broad based topics as social structure, economics, and religion (Biesele 1993; Evans-Pritchard 1940; Fine 1995; Firth 1936; Holtzman 2003; Kahn 1986; Mintz 1985). This section will review some of the literature regarding how people selectively consume subsistence resources to distinguish themselves and maintain markers of their cultural identity.

In order to understand the ways in which food can be actively manipulated as a marker of cultural identity, food must first be understood as a cultural construct in its own right. Taste is often perceived of as natural (Ulin 1995). The perception of taste is generally thought to be in large part due to climatic and environmental conditions that combine to produce a distinct flavor in the fruit, vegetables, wine, and even meat from cattle, sheep, and hogs from distinct areas (Bourdieu 1984). This is

not to say that soil conditions and weather have nothing to do with food production. Certainly different conditions give rise to variation in the way foods taste. However, the perception of this difference requires a preconceived notion of how the foods *should* taste (Meigs 1988; Messer 1984). Experience with certain foods provides a cultural precursor that shapes the expectations of how foods taste. In the same manner that phonemes may not be heard by someone unfamiliar with a given language, taste is also dependent on social conditioning for its interpretation (Bourdieu 1984). Thus, one may have an acquired taste for certain dishes while other foods, though perfectly edible, are not eaten. Taken to extremes, the case of food taboos provide a unique opportunity to clearly distinguish one group from another through subsistence (Douglas 1966). Cultural constructivists argue that taste is as much a cultural preference as the types of clothing people wear. Taste, that is preference for a certain flavor, is a matter of cultural and personal experience which may be delineated through natural processes; however its creation has more to do with social interaction than with soil composition (Hobsbawm 1983; Meigs 1988; Messer 1984; Ulin 1996).

Social interaction as negotiated through foodways can be seen in the social interactions for the Wamirans of Melanesia. Kahn (1986) suggests that through food, issues of sexual politics, gender relations, kinship, and economics can be understood for the Wamirans. Food functions as a powerful metaphor in this society where "famine" and "hunger" are qualitative and moral evaluations of human behavior as opposed to a state of nutritional well-being (Kahn 1986). Food in Wamiran society

represents something other than the nourishment of a body which is based on Western concepts of biology. For them, food represents how you live, how you interact with others in the society, and the expression of cultural beliefs.

The Wamirans also came to understand the differences between the ethnographer's society and their own culture through the metaphor of food. When the Wamirans tried to explain their culture in relation to Western society, they explained that "We are toro (similar to yams or sweet potatoes) people, but where you come from, people are money people. ... In your place, people are different, that is their life, that is who they are" (Kahn 1986: 154). Through this sort of statement, the Wamirans distinguish themselves in comparison to Westerners through food which is both metaphorical and empirical. The toro is at one level, a type of food. People eat toro and it is the staple of Wamiran diets. However, Kahn (1986) points out that the analogy between Wamirans and toro, in comparison to Westerners and money, is surprisingly accurate. The Wamirans have used food not only to represent different aspects of their own society, but also as a metaphor for their society in general. This representation of food shows just one instance of the use of foodways as a social and cultural marker. The delineation of different peoples and aspects of cultural identity can be seen through the Wamiran use of food (Kahn 1986).

The construction of ethnic boundaries or cultural markers can also be accomplished through selective consumption of certain foods (Messer 1984). An example of this can be seen in the dietary restrictions of the Samburu in Africa which include fish, reptiles, birds, donkeys, elephants, and many wild game animals

(Holtzman 2003). In this instance, food taboos are employed to delineate the differences between Samburu and neighboring tribes of Turkana pastoralists and Dorobo foragers. The Turkana and Dorobo do not practice similar food taboos, and the Samburu claim this proves the savage, or pre-cultural, nature of their local rivals (Holtzman 2003). Consumption of these forbidden animals could be practiced by the Samburu to no ill effect on their physical well being. In fact, it may be argued that increased variety in their diet would improve the overall health of the community. However, the Samburu consume mainly cattle from their herds as part of cultural practice that sets them apart from these other tribes (Holtzman 2003). The elephant, for instance, is perceived to be very similar to humans by the Samburu and so the Turkana and Dorobo consumption of these animals carries an especially strong stigma (Holtzman 2003). The Samburu use the established food taboos to dehumanize the other local tribes and this becomes a self-empowering principle that the Samburu use to rank themselves above their less-than-human, pre-cultural neighbors (Douglas 1966).

Samburu patterns of subsistence also create the opportunity for social stratification within their own society. The Samburu identity of those tribal members who are of Dorobo descent can be drawn into question through the claim that they continue to eat elephants in secret (Holtzman 2003). While these claims may be unsupported, it is difficult to remove the social stigma associated with such accusations. The food taboos established by Samburu pastoralists against most forms of meat other than cattle maintain a clear division between themselves and

neighboring tribes and are also used to reinforce social status within their own tribe (Douglas 1966; Holtzman 2003).

Foodways have also been utilized to differentiate people throughout an entire region. The Northern Paiute system of food-naming distinguished not only the groups of people living in a certain location, but also the major food resources consumed by those groups. For instance, the name for the kucadikadi people of the Mono Basin in eastern California means "eaters of brine-fly pupae" (Arkush 2000). This designation alludes to the Mono Basin Paiute practice of collecting the brine-fly pupae and larvae during the late summer. Long windrows of this insect would blow on shore from Mono Lake and the kucadikadi would scoop them up in baskets, dry them in the sun, and then husk the larvae by hand (Arkush 2000). Once this was accomplished the insects could be eaten or stored for the fall and winter months.

Other areas of the western Great Basin were known to Northern Paiute according to this food-name system. The name of a people reflected their major food resource and indicated to other Northern Paiute the types of food resources available in the area (Arkush 2000). In the instance of this food-naming system, cultural identity as represented by selective consumption is established not though the use of food taboos, but by the recognition of certain subsistence patterns. Group identity for Northern Paiute, and indeed their very name, comes from differential patterns of subsistence between several groups (Arkush 2000).

The issue of cultural identity as established through foodways can also be examined at the national level. France, perhaps more than any other Western nation,

is known for its culinary arts. A source of cultural pride, French foods have been a central part of national identity since at least the time of Grimod de la Reyniere in the early nineteenth century (Fantasia 1995). Reyniere's first publication of his *Almanach des Gourmands* began a series that chronicles the development of French taste which would later become immortalized in 1825 with *Physiology of Taste* by Anthelme Brillat-Savarin (Bourdieu 1984). These publications document the French perspective on such matters as taste, the proper preparation of meals, the social character of dining, and the philosophy and aesthetics of food, table presentation, and the human body in general. Over a century later, the National Council of Culinary Arts was formed in 1989 by the French Ministry of Culture (Fantasia 1995). This council is charged with protecting the culinary patrimony of France which includes the identification and inventory of major sites related to French culinary heritage, the creation of a national day of *gourmandize,* and the formation of a conservatory of cultural culinary heritage which will promote research, expositions, and educational activities that further French heritage as realized through foods (Fantasia 1995). The establishment of cultural identity through foodways in France has moved beyond the realm of personal taste and social preference to be researched, defined, and actively maintained by the French government.

Although the example of French foods may be more extreme than is true for most Western nations, it provides a clear case of a conscious effort to express cultural identity through foodways. The National Council of Culinary Arts actively distinguishes French heritage from that of surrounding nations in an effort to preserve

some notion of Frenchness in the face of intrusions such as fast food and the "Americanization" of food (Fantasia 1995). The creation of the council lends credence to the idea that there really exists a pure or true set of recipes and ways of preparing food that have always been French. In reality, contemporary French culinary practices are the result of hundreds of years of change, adaptation, appropriation, domination, and expansion (Bourdieu 1984; Fantasia 1995).

When people agree that certain sets of foods are acceptable and have been prepared in ways that adhere to cultural norms, these people find themselves identifying with one another in ways not seen with members of different cultures through a sense of shared heritage and tradition (Cooper 1986; Hobsbawm 1983). Through this type of interaction, cultural identity can be expressed through selective consumption of certain foods. Whether it be Wamiran islanders, Samburu pastoralists, Mono Basin Native Americans, or the French government, selective consumption of certain foods can be used to create social solidarity within groups and simultaneously establish social distance between groups (Beoku-Betts 1995; Counihan 1992; Dahlberg 2001; Ferguson and Zukin 1995; Friedmann 1982; Orlove and Schmidt 1995; Welch and Scarry 1995).

Ethnographic and historic accounts such as those detailed above provide examples of how selective consumption serves to express cultural identity in living populations. However, archaeologists have also been interested in questions of identity, although the subjects of their research are often peoples who may have lived long ago (Beaudry et al. 1991; Craib 1992; Nassaney 2001; Shennan 1994). Cultural

and social identity are topics that can be explored through archaeological inquiry and archaeologists have examined issues such as class, race, gender, status, and ethnicity through the material expressions of these identities (Conkey and Spector 1984; Meskell 2002; Nassaney 2001). Materials and objects are often imbued with a certain level of symbolic meaning that conveys messages about the user's identity (Paynter and McGuire 1991). Through the recognition that objects can and do carry information about identity, archaeologists have investigated questions concerning social relations in the past by examining material culture recovered in the present (Brumfiel 1992; Conkey and Gero 1997; Craib 1998; Gibbs 1987; McGuire 1982; Shanks and Tilley 1982; Wylie 1991).

This study also explores issues of identity as expressed through the archaeological record, and here it will be accomplished through the identification of variation in the remains of meals. Since subsistence practices are an expression of cultural identity, significant differences in the composition of refuse pits and middens where table scraps, leftovers, and unused food portions are discarded could also provide evidence for the maintenance and reification of cultural identity in the communities responsible for the deposition of those remains (Gust 1993). Similarities in the food remains may lead to the conclusion that foodways were not acting as a marker of cultural identity in these communities while variation in the remains may require explanation.

The animal remains recovered from Fort Michilimackinac exhibit the sort of variation that can be explained by cultural differences between the French and British

occupations of the site (Cleland 1970; Scott 1985). For the French occupation of Fort Michilimackinac (1715 - 1761), a large portion of the faunal assemblage is comprised of fish remains with a wide variety of fish, bird, and mammal species represented (Scott 1985). However, the subsequent British deposits at the fort (1761 - 1781) display heavier dependence on mammalian species in general and the consumption of many more domesticated animals. Cleland (1970) argues that this distinction may be attributed to social and cultural differences between the fort's occupants. The French population at Fort Michilimackinac mainly consisted of lower class Catholics who immigrated from France or French Canada. These people were accustomed to the types of food resources locally available at the Straits of Mackinac and were "... in essence, French peasants being French peasants at Michilimackinac" (Cleland 1970: 18). The fort itself was located at the end of a long supply line from Montreal and Quebec where goods from New France arrived infrequently (Scott 1985). In contrast, when the British took control of the fort it became part of a network of English military garrisons that were linked by a well-developed supply line and good communications (Cleland 1970). Transportation of domesticated animals to the Straits of Mackinac became more feasible. Social stratification also becomes more apparent during the British occupation from 1761 to 1780 and the personnel stationed at the fort generally consisted of higher class citizens than was the case during the French occupation. These people sought to maintain contemporary traditions from England although they were geographically distant from their homeland (Cleland 1970).

These differences in the religion, social status, and general affinity to their homeland result in variations between French and British subsistence at Fort Michilimackinac (Cleland 1970; Scott 1985). The poor French colonists exploited local resources in a manner consistent with their need to find nourishment in a marginal environment and in the absence of a means to procure imported goods. The British, on the other hand, were "transported Englishmen" who wanted to live as though the streets of London extended to the Straits of Mackinac (Cleland 1970). These differences are expressed in the faunal assemblage from Fort Michilimackinac with its low dependency on domesticates and wide range of species exploited by the French, while English deposits show a greater dependence on domestic species (Cleland 1970; Scott 1985).

This chapter has reviewed some of the literature pertaining to the construction of cultural identity as expressed through foodways. Ethnographic evidence and studies of living populations have demonstrated the use of selective consumption as a means for establishing and maintaining markers of cultural identity (Arkush 2000; Holtzman 2003; Kahn 1986; Ulin 1996). Food remains can also be used to explore issues of cultural identity through selective consumption as has been expressed in the faunal remains from Fort Michilimackinac (Cleland 1970; Scott 1985). The questions of concern for this study, however, include the interactions between European colonists and Native Americans at different locations in North America. As such, the French occupations of five colonial sites, Fort St. Joseph, Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III will be the focus of this research.

The next chapter, Chapter 3, will provide an environmental and historic context for Fort St. Joseph that focuses on the availability of food resources at the fort through an examination of pre-contact Native subsistence practices in the area of southwestern Michigan. Also, subsistence practices and internal social stratification as seen in documentary and archaeological evidence for Fort St. Joseph may lend insight into the availability of domestic species at this site. Finally, the environmental setting and social conditions at the other four sites in this study are detailed.

CHAPTER III

ENVIRONMENTAL AND HISTORIC OVERIVEW

The previous chapter reviewed some of the literature pertaining to cultural identity as expressed through selective consumption from both ethnographic and archaeological accounts. Selective consumption is ultimately constrained to the animal resources available for consumption. If a certain resource in unavailable, then people cannot actively manipulate this resource as an expression of cultural identity. This principle seems simple enough; however, determining the available resources for peoples and societies of the past is a necessary part of understanding the manipulation of those resources. This section will discuss the available food resources at Fort St. Joseph through documentary and archaeological evidence in an effort to identify the range of possible species suitable for animal exploitation in the area of southwestern Michigan during the fort's occupation. Also, issues concerning identity and European/Native interactions at this location will be examined. A historical context will also be provided for the other four sites included in this study.

Environmental and Historical Context of Fort St. Joseph

Southwestern Michigan was occupied by Native peoples long before Europeans arrived. Prior to contact, this region was the ancestral homeland of the Potawatomi (Cremin 1996). Following a split with their Algonquin relatives the Ojibwa and Ottawa, the Potawatomi occupied the area along the eastern shoreline of

Lake Michigan from about the beginning of the fifteenth century until the mid-1600s. Settlement patterns for Native peoples living in this area prior to contact followed seasonal availability of food resources. Permanent villages were occupied during summer months while temporary hunting camps were inhabited during the winter (Fitting and Cleland 1969). This yearly pattern of settlement allowed the Potawatomi to take advantage of riverine resources, such as lake sturgeon, during late spring when various fish species spawn (Fitting and Cleland 1969). Mobile winter hunting camps allow large groups of people to utilize the wild game species, mainly white-tailed deer, for consumption without overexploitation of the resource (Bettarel and Smith 1973). The Moccasin Bluff, Spoonville, Zemaitis, Land, and Spring Creek sites are representative of these types of occupations (Martin 1976; Martin and Richmond 2001). This type of settlement pattern was based on maximizing the yearly cycle of available animal species, namely fish, wild game, and wild plant resources, in conjunction with maize and other crops planted by Native peoples (Fitting and Cleland 1969).

The area of southwestern Michigan is located along the northern boundaries of the Carolinian biotic province (Dice 1943). This climatic zone is suitable habitat for a variety of animal species including white-tailed deer, raccoon, beaver, opossum, black bear, eastern cottontail, wild turkey, passenger pigeon, ruffed grouse, and many varieties of duck, among others (Cleland 1966). Wapiti and bison would also have been found in the open areas of the Carolinian biotic province. Lake sturgeon, channel catfish, redhorse suckers, turtles, and freshwater mussels were some of the

aquatic resources available to a community that lived in proximity to a river in this area (Cleland 1966).

The Potawatomi settlement pattern in southwestern Michigan was disrupted when the Iroquoian expansion, probably from the area of southwest Ontario, pushed established groups of Potawatomi out of the region by at least 1643 (Hunt 1960). The refugees fled north to the Straits of Mackinac and on to Sault Ste. Marie where they were first encountered by the French. The Potawatomi finally settled in the area of what is now Green Bay where they established villages along the bay itself, on Rock Island, and along the eastern shoreline of the Door Peninsula (Mason 1986). When LaSalle visited the Green Bay area in 1679, he encountered Potawatomi villages along the western shore of Lake Michigan and as far south as present day Milwaukee (Cremin 1996).

Following the flight of the Potawatomi to Wisconsin in the mid-17th century, the area of southwestern Michigan lacked permanent settlement because it was under constant threat from Iroquois invaders (Hunt 1960). When LaSalle explored the St. Joseph River in 1679, he reported no established villages along its banks (Cremin and Nassaney 1999).

The fall of Fort St. Louis to the Iroquois in 1684 marked the return of Native peoples to the area. Miami living at the fort were drawn to the mission established by Father Claude Allouez near present day Niles, Michigan (Idle 2003). In the following year, Governor-General Denonville granted the Jesuits a tract of land along the St. Joseph River to continue their missionary work and strengthen the relations with

natives in the area. The location of the Jesuit mission also proved a strategic military location near the St. Joseph-Kankakee River portage and along major east-west trade routes (Nassaney et al. 2004). To further strengthen the French occupation of this area and utilize this strategic locale, Frontenac, who succeeded Denonville as the Governor-General of New France, dispatched a small detachment of French soldiers to establish a military presence among the Miami (Idle 2003; Peyser 1978).

In 1691, the French military post that would be known as Fort St. Joseph was established on the St. Joseph River. This fort, however, would never prove to be a vital military bastion. Instead, it provided a valuable trade center for the area and became the fourth largest outpost, in terms of the volume of furs being traded, for New France in the eighteenth century (Cremin and Nassaney 1999). The Miami's hold on the area would prove to be short lived, however, as the Potawatomi's return from the area of Green Bay brought these people to the St. Joseph River in large numbers by at least 1695 (Cremin 1996). By 1710, most if not all of the local Miami population had relocated to the south and a large community of Potawatomi had taken up residence across the river from Fort St. Joseph with occasional visits to the fort by the Ottawa, Kaskaskia, Kickapoo, Mascouten, and Wea (Hulse 1981; Idle 2003).

European patterns of settlement did not match those of their Native American predecessors in the area. A permanent outpost was built where year-round trade could be conducted. It is unclear whether the Potawatomi, upon their return from the Green Bay area, continued their seasonal settlement pattern of large stationary summer communities and smaller nomadic winter hunting camps or if they established a

permanent settlement on the banks of the St. Joseph River to stay in close proximity to the mission and trading post.

Despite the change in settlement patterns between Europeans and pre-contact Native Americans, similar animal resources would have been available to the newly-arrived colonists in the area. However, in addition to these local, wild game resources, European colonists would have had access to imported goods and new technologies that could aid in subsistence in ways not available to Native Americans before Europeans arrived. For instance, Europeans were hunting more bird species and in greater numbers than contemporary Native American groups at the Straits of Mackinac. This has been attributed to the use of firearms as a more effective and reliable means of collecting these species, and evidence can be seen in the frequency of shot holes in bird bone specimens (Cleland 1970). In addition, domestic animal species such as cattle, swine, sheep, goats, and chickens could have been transported to the fort to provide traction, milk, and meat for the residents.

The French maintained control of Fort St. Joseph until it was taken over by the British in 1761 (Idle 2003). This shift in regime, while perhaps historically significant, probably did not mark a dramatic shift in the lifestyles of the fort's residents. Approximately 12 to 14 French families were residing in about 15 households at the fort during the latter part of the French period and early portion of British occupation (Nassaney 2003). Thomas Hutchins, an American surveyor who visited the fort in 1762, noted the presence of cattle and horses. He writes ". . . they [the French] raise nothing more than some Indian corn and make a little hay to

support their horses and mules and a few milch cows, which seems to be all the stock they have" (Cremin and Nassaney 1999: 20). This documentation places a few domesticated animals at the fort minimally during the early period of the British occupation and is supported by archaeological evidence (Nassaney et al. 2003).

The 1763 uprising known as Pontiac's Rebellion marked another shift in political control for Fort St. Joseph. British military occupation of the fort had been effectively dispatched and control fell to the French merchant Louis Chevalier who served as a British agent and once again established vigorous commerce between European traders and Native peoples (Nassaney et al. 2003). American advances into British occupied territories brought about the re-garrisoning of the fort by a British detachment from Fort Michilimackinac in 1779. When the soldiers arrived, the remaining 8 to 15 French families still living at the fort were forced out (Peyser 1978). In February of 1781, Fort St. Joseph was attacked and captured by a combined French and Native American force sponsored by the Spanish governor at St. Louis (Cremin and Nassaney 1999). This marked the end for Fort St. Joseph during the colonial period and explains the present-day motto of Niles, Michigan as the "City of Four Flags," commemorating the only place in Michigan where French, British, Spanish, and American flags have flown (Cremin and Nassaney 1999).

No great climatic shifts are recorded for the area of southwestern Michigan from the Late Woodland through Contact periods, so it may be assumed that the range of available animal species utilized by Native Americans in this area would have been potentially available to European colonists through the early part of the 18th century.

Natural fluctuations in animal populations are to be expected, although these are generally not so drastic as to cause a decline in the availability of species for consumption over prolonged periods (Grayson 2001). Those animals typical of the Carolinian biotic province would have been plentiful in the area of Fort St. Joseph during the early part of the fort's occupation. Species availability and population decline are possible due to over-hunting in the area through extended occupation of the site, and these effects may be reflected in the faunal assemblage. However, recognition of these effects will require extensive excavation and greater chronological control to assess temporal change within the fort's early and late periods. For the purposes of this study, it is assumed that species availability remained essentially constant during the 90 year period (1691 – 1781) of the fort's occupation due to low human population levels and seasonal scheduling of animal exploitation.

Social and Demographic Context at Fort St. Joseph

While Fort St. Joseph was indeed a French colonial outpost that also experienced British occupation, it should not be thought of simply as an island of European culture on the outskirts of a vast American wilderness. Cadillac estimated that 200 warriors could be recruited from the Potawatomi living in southwestern Michigan in 1694. This places an approximate population of 1,200 Native peoples at or near Fort St. Joseph during the early part of its occupation (Sleeper-Smith 2001: 38). Additional Native tribes in the general vicinity of the St. Joseph-Kankakee

portage included Illini, Miami, Huron, Mahican, Fox, Sauk, and Wabunaki. This was a land full of people with their own conceptions of what was meant by European expansion into the Great Lakes region, and success meant fur traders had to negotiate the landscape according to Native traditions, not European custom. The many nations and tribes in this area formed a loose community that incorporated strangers through intermarriages and occasionally adoption (Sleeper-Smith 2001). Kinship ties not only formed alliances, but also provided a reference for people to understand one another's position within this larger community.

This was the world in which Great Lakes French fur traders had to operate from the late 1600s through the middle to late 1700s. Kin networks were the vital key to success in trading with the many Native groups in the Great Lakes region, and intermarriages with Native women allowed these Europeans to become a part of this network (Sleeper-Smith 2001). While this practice facilitated trade, it was viewed with contempt by the clergy. The high instance of marriages and sexual relations between French traders and Native women was seen by the Jesuits as adulterous and threatening to the missionary efforts (Sleeper-Smith 2001). However, traders justified their actions by claiming to be "wilderness diplomats" and skillful Indian negotiators who could operate in both European and Native societies.

The Native Americans were also undergoing culture change during this time as Catholicism became widespread through French missionaries. Baptismal records from Fort St. Joseph show the conversion of local Potawatomi to a new faith in the Christian god. This conversion, however, did not mark a complete transformation

into European custom. On the contrary, Catholicism provided yet another opportunity for Native peoples to expand the extensive kinship networks through the naming of Godparents during the baptismal ceremonies of their sons and daughters (Sleeper-Smith 2001). Through this Catholic kinship network, commandants became Godfathers to a growing community of *métis* while Native women with extensive kinship networks were often named Godmother. The practice of naming Godparents expanded existing Native kinship networks and allowed French traders, Native wives, and their *métis* offspring to operate within both European and Native society (Sleeper-Smith 2001). The social setting of Fort St. Joseph was one that required European traders to become incorporated into Native society. Through intermarriages, Godparents, and *métis* populations, the demographic make-up of the fort was one that must have meant occupation by a substantial number of Native peoples or people of mixed ancestry (Sleeper-Smith 2001). Marriages at Fort St. Joseph, such as the one between Louis Chevalier (a French trader from Michilimackinac) and Marie Madeleleine Reaume (the daughter of an Illini woman and French trader) expanded kinship networks, both through blood and religion, from Canada to the American Bottom. The large L'archeveque-Chevalier kinship network that resulted from this marriage could be traced from Montreal to French Cahokia (Sleeper-Smith 2001). Traditional accounts tell of the success of French fur traders, however the accomplishments of these men often came only when supported through the kinship building efforts of Native and *métis* women. While men were out plying their trade, these women at Fort St. Joseph maintained favorable relations with trade partners

through households constructed at the fort, with the Potawatomi, or both (Sleeper-Smith 2001).

Environmental, Historical, and Social Context at the other Four Sites

The sites utilized for comparison in this study exhibit different social conditions. Some, like Fort Michilimackinac and Fort St. Joseph, had periods of French and then British occupations, however the distinction of concern here is with the French occupation of these different sites as opposed to cultural differences between the French and British occupants at the same location. Fort St. Joseph, Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III all experienced French occupation during the eighteenth century and have been selected for comparison in this study due to their relatively similar environmental settings in the Carolinian biotic province and along rivers.

Although Fort Michilimackinac would seem to be a likely candidate for inclusion in this discussion, the environmental conditions in which colonists lived at this location varies greatly from that experienced at Fort St. Joseph and the other four sites to the south. Fort Michilimackinac's position on the Straits of Mackinac between Lakes Huron and Michigan provides an ideal opportunity for the exploitation of fish resources from the Great Lakes (Scott 1985). This abundant resource would have ensured a consistent and plentiful source of aquatic animals which was significantly different from the kinds of species that were available from the St. Joseph, Wabash, and Mississippi rivers. Also, these sites were located in two different and distinct biotic provinces. The Canadian biotic province, which extends

from southern Canada to the upper portion of Michigan's Lower Peninsula, including the Straits of Mackinac, is marked by a mixture of plant and animal species found in both the Hudsonian biotic province to the north and the Carolinian biotic province to the south (Dice 1943). Fort St. Joseph, Fort Ouiatenon, French Caholkia, Fort de Chartres I, and Fort de Chartres III were all located within the more southerly Carolinian biotic province which extends from the middle of Michigan's Lower Peninsula across most of what is today considered the mid-western United States (Dice 1943).

The characteristics of the Canadian biotic province are cool summers, cold winters, and the presence of distinctive animal species. Some of the more common game mammals include moose, white-tailed deer, fox, wolf, black bear, beaver, porcupine, and bobcat (Dice 1943). While an array of conifers is typical of the northern province, some large forests of deciduous trees are not uncommon in the area (Dice 1943, Fitting and Cleland 1969).

Also called the Oak-Deer-Maple Biome, the Carolinian biotic province is typified by broad-leaf deciduous trees like oak, hickory, maple, beech, elm, and cottonwood (Dice 1943). A wide variety of animals are present and although white-tailed deer were the most prevalent game animal, wapiti, black bear, eastern cottontail, opossum, and other medium to small mammals thrive. The occasional bison also inhabited open areas and the climate of this province is more moderate than that of the Canadian, with shorter winters, less snowfall, and longer, hotter summers.

Soils were also deeper and rich in comparison to the more northerly Canadian biotic province (Dice 1943).

This difference in environmental conditions between the more southerly sites and Fort Michilimackinac also marks a difference in the relative proportions of plants and animals that would have been available for consumption. Fort St. Joseph, Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III were located along rivers in contrasted to the shoreline environment of Fort Michilimackinac. The differential biotic environs in which these forts were located exaggerates inevitable differences expressed in the faunal assemblages recovered from Fort Michilimackinac. While comparison with Fort Michilimackinac may still produce useful information, those sites located across what was known as the Illinois Country, in addition to Fort St. Joseph, may prove to be more similar in terms environmental setting (Dice 1943).

For the purposes of this study, Fort St. Joseph will be contrasted to Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III in an effort to minimize differential environmental factors that affect game species populations. By holding environment constant, geographical distributions of species available at each site will be more comparable. Thus, variation in animal exploitation patterns is probably not due to environmental factors and this helps isolate different social conditions at each location so that distinctions in subsistence patterns may be more closely associated with socio-cultural factors as opposed to environmental constraints. Although these sites are spread across the Carolinian biotic province and there may

have been subtle differences in geographical distribution of available species, they can generally be used to examine inter-site animal exploitation patterns for French colonists in North America during the eighteenth century.

While environmental factors are being controlled in this research, social conditions at each location are variables of much interest. Tordoff (1983) has provided a hierarchical system for ranking French colonial sites in North America based on their functional role in the fur trade. She distinguishes sites that served as a: (1) Port of Entry, (2) Government/Economic Center, (3) Regional Distribution Center, (4) Local Distribution Center, or (5) Aboriginal Population Center (Tordoff 1983). This hierarchical ranking system reflects a decrease in the internal functional complexity of each location from more complex to less as one moves from the Port of Entry to Aboriginal Population Centers. In addition, this system is a representation of the branching out of French colonial exploration that tracks the supply lines and flow of goods both in towards and out from the American interior (Tordoff 1983: 39).

The five sites selected for this study include two locations that functioned as regional distribution centers, those being Fort de Chartres I and III, two locations that functioned as local distribution centers, which are Fort St. Joseph and Fort Ouiatenon, and the agricultural community of French Cahokia (Tordoff 1983). Fort de Chartres I and III were designated as regional distribution centers from their inception and the social environment of these forts exhibit some measure of internal stratification. Fort de Chartres I was reported to garrison 60 men with a surrounding village of thirty-nine *habitants*, forty-two white laborers, twenty-eight married women, and seventeen

children by 1724 (Jelks et al. 1989). This number increased over time as the French presence in the area grew stronger and a more permanent stone fort, Fort de Chartres III, was built in the mid eighteenth century. Military personnel, *habitants*, civilians, and trappers are just a few of the people who came to live at or near these forts and the French maintained a military garrison at these locations throughout their occupation. Fort St. Joseph and Fort Ouiatenon did not have a strong military presence and governmental control at these remote locations was weak in comparison to regional distribution centers (Tordoff 1983). Fort Ouiatenon was known to intermittently garrison about 12 French Marines during its occupation (Martin 1986) and Fort St. Joseph did not even boast this small number of military personnel for any substantial period of time (Idle 2003).

French Cahokia was an agricultural community established as a mission in 1699 to supply the Louisiana Colony and Illinois Country with crops such as wheat, corn, tobacco, cotton, flax, hemp, and salt (Gums 1988). This site is somewhat unique when compared to the others in that it does not directly function as part of the fur trade. However, Native American groups were known to participate in limited trading with this community, and it certainly played a role in supporting other communities such as Fort de Chartres and Fort Ouiatenon with agricultural goods (Jelks et al. 1989). Military personnel were never garrisoned at this location and the function of this community was for the production of agricultural goods. The site was inhabited by those European farmers and their families that worked the land (Gums 1988). It will be interesting to see how issues of cultural identity are played out at this

primarily agricultural location that was situated approximately 20 miles from the larger supply depots of Fort de Chartres I and III. Access to goods and services from a regional distribution center may have influenced European and Native interactions at the nearby agricultural community.

Differences in social conditions, such as varying frequency of intermarriages, at each of these locations may have affected the types of relations colonists had with neighboring Native American tribes. As social identity (i.e. class, gender, race, and ethnicity) also affects the expression of cultural identity (Nassaney 2001; Shennan 1994), sites with a greater degree of internal complexity and more social stratification may have resulted in more formal relations with Native allies. High status government officials and military officers would have interacted with Native peoples as representatives of the French government. This requires an air of formality that reflects a meeting of two nations (White 1991). However, civilians such as blacksmiths and traders would have had a much more informal set of interactions with Native peoples that allowed them to conduct business on a personal level (Wise 2001), even to the point of marrying one another (Sleeper-Smith 2001). Locations such as Fort St. Joseph and Fort Ouiatenon, with their lower levels of internal social stratification and increased daily support from Native American allies, experienced greater degrees of integration and shared values than at sites with more social stratification brought about by a strong governmental and military presence (White 1991; Wise 2001). Marriage between European traders and Native women would have been a crucial aspect of everyday life in remote, frontier settings as this benefited

both sides by creating kinship relations that facilitated trade and strengthened alliances in case of attack (Sleeper-Smith 2001).

This chapter has explored the range of available animal species at Fort St. Joseph through archaeological and historical evidence. White-tailed deer, raccoon, beaver, black bear, lake sturgeon, passenger pigeon, wild turkeys, and many duck species would have been available for consumption in the area of southwestern Michigan during the eighteenth century. From historical and archaeological evidence, it is known that residents of the fort had some domesticated animals by at least 1762 and so the possibility exists for cattle, swine, sheep, chicken, and horse to have made dietary contributions as well (Nassaney et al. 2003). Based on the range of available species presented in this chapter, this study seeks to identify animal exploitation patterns at Fort St. Joseph and determine the proportions of wild game and domestic species that were being consumed at this location. Then a comparison can be made with animal exploitation patterns from other French colonial sites. Two of these sites, Fort de Chartres I and III, functioned as regional distribution centers according to Tordoff's (1983) hierarchical network of the French colonial fur trade. Fort St. Joseph and Fort Ouiatenon were on the other end of the political and social spectrum. These sites functioned as local distribution centers, exhibited less governmental and military control, and were located in remote parts of the American frontier. French Cahokia occupies a unique position as a rural agricultural community in close proximity to the regional distribution center of Fort de Chartres I and later Fort de Chartres III (Gums 1988). Social distinctions such as class, gender, and ethnicity

were expressed differently through material culture at each of these locations depending on the site's internal social stratification (Wise 2001). So, too, might have the interactions between Europeans and Natives taken on different meanings at each location due to different social conditions, intermarriage, and increased *métis* populations (Sleeper-Smith 2001). These differences may be reflected through foodways, and so this study seeks to identify expressions of cultural identity through selective consumption of animal species by comparing the faunal assemblage from Fort St. Joseph to those recovered from each of the other four locations. The next chapter will detail the methodology employed in the collection and identification of the faunal remains from Fort St. Joseph and the comparative analysis of this assemblage with other French colonial sites.

CHAPTER IV

METHODOLOGY

In the previous chapter, the range of available animal species available for consumption was identified for the area of southwestern Michigan in the eighteenth century. Based on historical documents and archaeological evidence, both wild species and domesticates were known to have been available during the fort's occupation. Analysis of the animal bones from the fort may reveal animal exploitation patterns at the site, permitting identification of relative proportions of wild game and domesticated animals that were being consumed at Fort St. Joseph. This chapter will detail the methodology for recovery, identification, and analysis of a sample of the faunal remains from the Fort St. Joseph site.

The modern, systematic archaeological investigations of Fort St. Joseph began in 1998 by Western Michigan University archaeologist Dr. Michael Nassaney. Through a series of shovel test excavations, the Fort St. Joseph archaeological project was able to positively identify a deposit of French and English artifacts dating to the eighteenth century on a narrow strip of land between the St. Joseph River and a twentieth century landfill in Niles, Michigan (Nassaney 1999; Nassaney et al. 2004)

In 2002, the Western Michigan University archaeological field school directed by Drs. Nassaney and William Cremin returned to this location in Niles in order to determine if this was indeed the site of Fort St. Joseph. A full scale archaeological excavation of the site was planned with the goals of establishing site stratigraphy,

collecting artifacts, documenting subsurface features, and determining site integrity. However, when the archaeologists arrived in mid-May, the St. Joseph River was in flood stage and the site was under a meter of water. In the following two weeks, the water receded and an engineering firm was hired to drain the site (Nassaney et al. 2004). On May 31st of 2002, excavation finally began on a site that had been missing for approximately two centuries.

During the following three-week period, 20 square meters were excavated at the site representing 12 excavation units (Figure 1). The first six 1x1 meter units were placed near the river's bank while a geophysical grid was set in the interior of the dewatered area. Cesium-vapor magnetometry, ground penetrating radar, electrical resistivity, and electromagnetic induction helped to guide archaeological excavations and several anomalies were identified (Lynch 2004). Special samples were collected below the plow zone from each excavation unit. From the southwest corner of the majority of levels below, a 6,250 cubic cm sample (25 cm x 25 cm x 10 cm) of sediment was taken for wet screening through 1/8th-inch mesh and a larger sample (50 cm x 50 cm x 10 cm) was taken from select levels in certain excavation units. A 1,000 cubic cm sample (10 cm x 10 cm x 10 cm) was taken from the northeast corner of each level for wet-screening through a finer 1/16th-inch mesh. The macro-recovered elements were collected using ¼-inch mesh dry screening. All wet-screen samples were further sorted by hand in the laboratory.

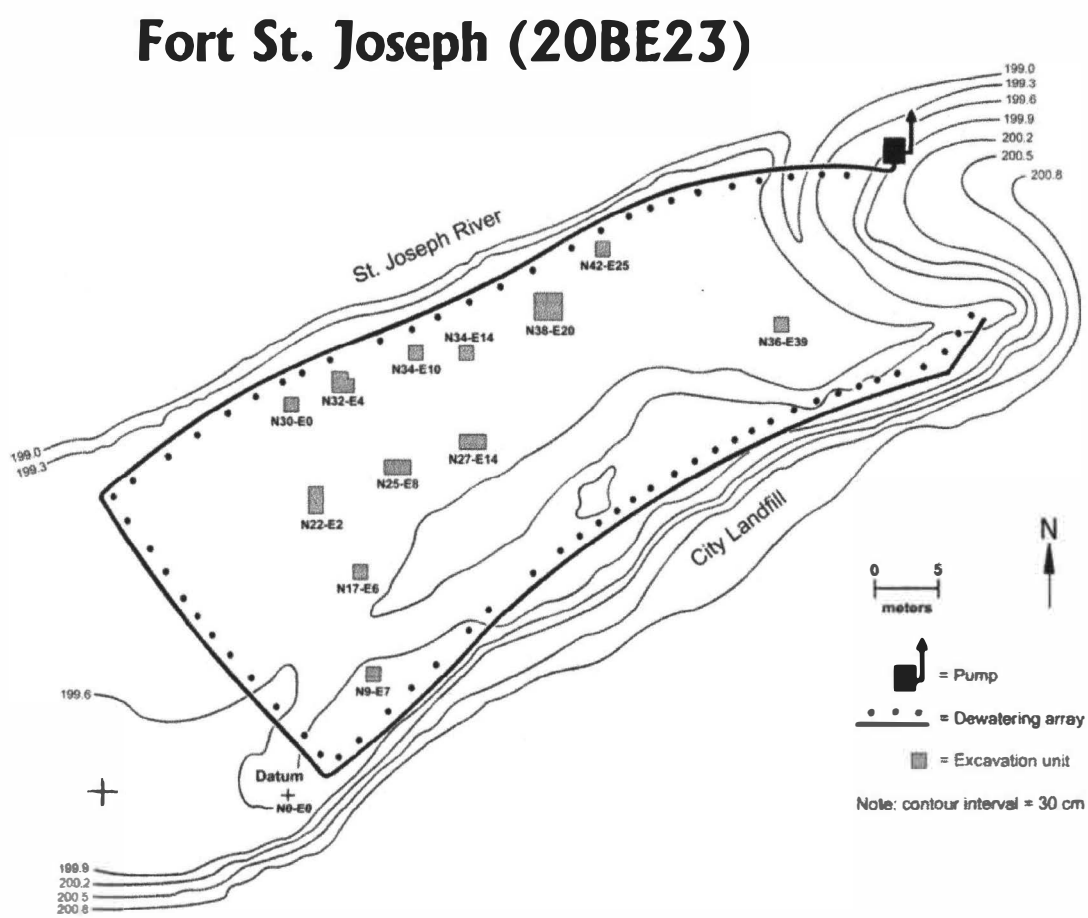

Figure 1- Fort St. Joseph Site Map

These excavations led to the recovery of over 7,000 faunal remains. The sample for this analysis includes animal remains recovered from eight of nine features identified and excavated to date. Feature 8 has, so far, failed to yield faunal material and has been omitted from this study. Faunal remains recovered from the other eight features have been selected for this analysis as a means of sampling the assemblage. This method of sampling is representative of the assemblage as a whole as it includes over 2,000 specimens of approximately 7,000 total specimens that were collected

from the site. Additionally, nearly 1,400 specimens from non-feature contexts were analyzed and these results closely reflect those patterns observed in the data from the features. By using a sampling method that incorporates nearly 30% of the assemblage and through comparable results with a 1,400 sample of specimens not included in the analysis, the sampling method employed in this analysis provides data that is representative of the entire assemblage. As such, the animal remains collected from feature contexts and used in this study are presumed to be an accurate representation of the whole.

The faunal remains have made several trips from Kalamazoo, Michigan to Springfield, Illinois where use of the comparative osteology collection housed at the Illinois State Museum's Research and Collections Center and the expertise of Dr. Terrance J. Martin, Curator of Anthropology at the Illinois State Museum, could benefit the identification process. For each identified specimen, an IBM-compatible computer and Microsoft Access software were used to log the count, weight in grams, provenience, class of animal, taxon to the finest level possible, anatomical element, side, portion, completeness, condition of the epiphyses, modifications (e.g., knife marks, chopping, carnivore- and/or rodent-gnawing, and burning) for each specimen. Zoological nomenclature follows the Integrated Taxonomic Information System (ITIS) website.

Number of Identified Specimens (NISP) data is reported as both count and weight in grams. Each specimen from feature context has been examined using the criteria listed above and the totals for count and weight have been calculated for each

class and taxon. Specimens that could be refitted in the laboratory received a count of one and the weight of all fragments was combined. Percentages of class and taxa for NISP data reveal the relative proportions of species that make up the composition of the assemblage. It provides an assessment of the available empirical data (that is, the animal bones themselves) and does not reflect dietary contributions (Olsen 1971). Once NISP data has been calculated for class and taxa at the Fort St. Joseph site, these results can be contrasted with similar data obtained through the same process of quantification from faunal assemblages at the other four French colonial sites in this study.

Minimum Number of Individuals (MNI) was calculated by comparing the anatomical elements of each species for each feature (Parmelee 1985). MNIs were calculated using the most frequently encountered element while taking into account portion, side, size, and age. This analysis follows the maximum distinction approach for estimating MNIs (Grayson 1978), which considers remains from each feature to be deposited separately, so that the total MNI is the sum of the MNI calculated from each feature. This approach allows for a closer correlation between MNI analysis of faunal remains and artifacts recovered from the same context. MNI results reflect an estimate of the number of animals of each species that the faunal assemblage represents (O'Connor 2000). These results can then be contrasted as a percentage of each class or taxa against the total number of MNIs. Once MNI percentages have been calculated for class and taxa at the Fort St. Joseph site, these results can be

contrasted with similar data obtained through the same process of quantification from faunal assemblages at the other four French colonial sites in this study.

Biomass calculations were conducted using allometric scaling formulae (Reitz and Scarry 1985). This method estimates the amount of meat associated with each specimen based on an exponential linear equation that accounts for the class of animal and weight of the specimen (Reitz et al. 1987). Totals were obtained by using NISP weights for each biomass calculation based on the class or taxa that was being utilized. Biomass estimates the contribution to diet in terms of meat weight in kilograms for each specimen, species, and class identified in the assemblage. Bivalves and amphibians were excluded from this method of analysis. Once biomass percentages have been calculated for class and taxa at the Fort St. Joseph site, these results can be contrasted with similar data obtained through the same process of quantification from faunal assemblages at the other four French colonial sites in this study.

The methods of analysis chosen for this study include number of identified specimens, minimum number of individuals, and biomass estimates calculated by allometric formulae. These three methods of analysis have been chosen so that relative proportions of species present in the assemblage may be established. This study will compare the relative proportions of animal species being exploited at French colonial sites as an indicator of differences in selective consumption at each location.

The types of species of most concern here will be relative proportions of wild vs. domesticated large mammal species. Domesticated species include cattle, swine, horse, and ovicaprids. Wild game species utilized for animal exploitation are best represented in the assemblages by white-tailed deer. While other wild animals, such as raccoon and beaver, were certainly available for consumption, white-tailed deer presents the most prevalent locally available species utilized for consumption. Also, large animals such as white-tailed deer, pigs, cattle, and sheep may be approached as a food source in much the same manner and display similar patterns for butchering practices and meat cuts. Limiting this analysis to white-tailed deer as representative of wild species also reduces complications with the presence of animal bones in the assemblage that may not have been used for dietary consumption. Foot bones that remain attached to hides but do not have a high subsistence utility, such as phalanges from black bear hides, complicate the issue of consumption. This may also be the case for raccoons, beavers, and white-tailed deer as the hides of these animals had value in the fur trade. If a species was generally taken for hides and not used for consumption, then comparison of this species with domesticates will not address the issue of selective consumption as an expression of cultural identity. Analysis of the portions and elements of each large mammal species has determined that the use patterns associated with white-tailed deer represent elements from all portions of the carcass. This result indicates that white-tailed deer were used for consumption purposes as well as hide exchange (see Appendix A). Additionally, white-tailed deer remains are found in abundance at each of the five locations selected for comparison

in this study and this species represents the best sample of wild game animals for each assemblage. Also, the exclusion of all wild game species except for white-tailed deer also helps normalize the relative populations of availability at each location as this species would have found favorable climatic and habitation conditions at all five locations (Baker 1983; Dice 1943).

The results of the faunal analysis from Fort St. Joseph will be compared to similar studies from Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III in order to identify variation or similarities in the proportions of domesticated species as opposed to white-tailed deer specimens present at each location. Differences in the relative proportions of domesticated vs. wild game species used for animal exploitation are examined in order to identify markers of selective consumption at each location which may indicate differences in the expression of cultural identity.

The methods of recovery utilized during the 2002 Western Michigan University archaeological fieldschool resulted in a faunal assemblage with over 7,000 well preserved specimens of animal bone. The processes for the sampling, identification, and quantification of these specimens used in this study have been detailed in this chapter. NISP, MNI, and biomass calculations, were selected in order to identify patterns of animal exploitation through an ordinal ranking of species at the Fort St. Joseph site. These results can then be compared to the results of similar methods of analysis from Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III to explore patterns of animal exploitation at French colonial sites

more generally. Results of the faunal analysis from Fort St. Joseph, including NISP, MNI, and biomass data, are detailed in the following chapter.

CHAPTER V

ANALYSIS

The previous chapter detailed the methodology employed in this analysis of the animal bones collected from the Fort St. Joseph site (20BE23) by the 2002 Western Michigan University archaeological fieldschool. In this chapter, the analysis and results are presented.

Over 2,000 specimens have been selected for this analysis. These were recovered from feature contexts while the entire assemblage consisted of more than 7,000 specimens (Table 1). Number of Identified Specimens (NISP), Minimum Number of Individuals (MNI), and biomass calculations for the assemblage will each be detailed in turn followed by a summary of the analysis. In all three methods of analysis, mammals represented the majority contribution, followed by birds, reptiles, fish, bivalves, and amphibians (Figure 2).

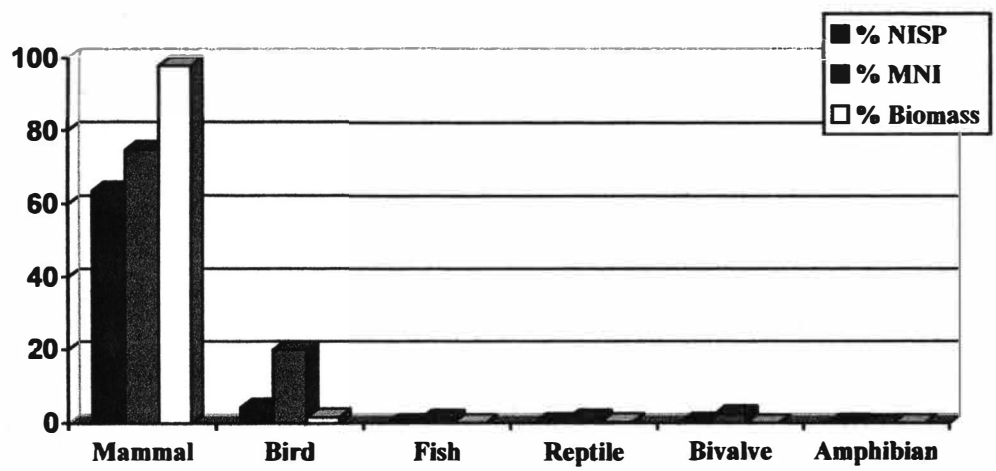

Figure 2- Graph: Percent of Class Representation from Feature Contexts at Fort St. Joseph

Table 1

Class Composition from All Feature Contexts at Fort St. Joseph:
Combined Macro and Wet Screen Recovery

Taxon	NISP[1]	NISP %	NISP Wt.(g)	NISP Wt.%	MNI[2]	MNI %	Biomass[3] (Kg)	Biomass %
Mammals	1733	63.7	3549.8	96.1	57	74.6	48.575	97.9
Identified	326		2425.1		57		31.844	
Unidentified	1407		1124.7		--		16.731	
Birds	120	4.4	50.1	1.4	19	20.0	0.830	1.7
Identified	35		28.9		19		0.501	
Unidentified	85		21.2		--		0.329	
Fish	4	0.1	0.4	0.1	1	1.2	0.016	0.1
Identified	1		0.1		1		0.005	
Unidentified	3		0.3		--		0.011	
Reptiles	8	0.3	6.7	0.2	1	1.2	0.155	0.3
Identified	2		3.9		1		0.079	
Unidentified	6		2.8		--		0.076	
Amphibians	1	>0.1	0.1	0.1	1	1.2	--	--
Identified	--		--		--		--	
Unidentified	1		0.1		1		--	
Vertebrata								
Unidentified	842	30.9	69.4	1.8	--		--	
Bivalves	11	0.4	12.8	0.3	2	2.4	--	--
Identified	2		6.3		2		--	
Unidentified	9		6.5		--		--	

[1] NISP, number of identified specimens
[2] MNI, minimum number of individuals, maximum distinction method, calculated as sum of individual features
[3] Biomass calculated by use of allometric scaling formulae (see Reitz and Scarry 1985:67). Calculations achieved by summing individual features

Number of Identified Specimens

Mammals accounted for 96.1% (n=3549.8 g) of the assemblage according to NISP weight (Table 1). This class of animals represents 63.7% (n=1733) of the assemblage by NISP count and this discrepancy is due to the more easily identifiable specimens being larger in size and weight receiving a count of one while many of the small, highly fragmented, mammal bones could not be identified. Eleven species of mammals have been identified in the assemblage including raccoon, beaver, porcupine, black bear, and swine; however the most abundant species was white-tailed deer (Table 2). This species accounts for 80.7% (n=263) of all identified mammal specimens by count and 83.6% (n=2027.1 g) by weight. In fact, specimens from white-tailed deer were certainly the most abundant single species in the entire assemblage from feature contexts accounting for 71.9% (n=263) of all identified specimens by count (N=366) and 82.3% (n=2027.1 g) of the total NISP weight (N=2464.3 g). In comparison, domesticated mammal species (cattle, swine, and horse) make up only 2.1% (n=7) of the NISP count for identified mammal specimens (Figure 3). A single specimen from domestic cattle was recovered from feature contexts and the weight of this specimen alone (126 g) should be noted as the heaviest single specimen recovered from feature contexts. Domesticated mammals accounted for 5% (n=178.4 g) of the NISP weight for mammals and 4.8% for the whole assemblage. There were five individual bird species (Canada goose, domestic chicken, ruffed grouse, wild turkey, and passenger pigeon) identified in this assemblage and two groups, *Anatinae*, or duck species, and *Galliformes*,

Table 2

Species Composition from Feature Contexts at Fort St. Joseph:
Combined Macro and Wet Screen Recovery

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Mammals					
Eastern Cottontail, *Sylvilagus floridanus*	1	0.2	1	0.005	0.01
Beaver, *Castor Canadensis*	7	53.5	3	0.945	1.91
Porcupine, *Erethizon dorsatum*	6	10.7	3	0.222	0.45
cf. Porcupine, *Erethizon dorsatum*	3	2.5	--	0.059	0.12
Dog/Coyote/Wolf, *Canis* spp.	1	1.5	1	0.038	0.08
Black Bear, *Ursus americanus*	8	94.7	5	1.580	3.19
Raccoon, *Procyon lotor*	27	40.6	10	0.737	1.49
Horse sp., *Equus* sp.	1	18.1	1	0.356	0.72
Domestic Pig, *Sus scrofa*	5	34.3	3	0.634	1.28
cf. Domestic Pig, *Sus scrofa*	1	1.2	--	0.031	0.06
cf. Wapiti or Elk, *Cervus elaphus*	2	14.7	--	0.295	0.58
White-tailed Deer, *Odocoileus virginianus*	263	2027.1	29	24.899	50.23
Domestic Cattle, *Bos taurus*	1	126.0	1	2.043	4.12
Unidentified Mammal	1407	1124.7	--	16.731	33.74
Sub Total	1733	3549.8	57	48.575	98.00

[1] NISP, number of identified specimens
[2] MNI, minimum number of individuals, maximum distinction method, calculated as sum of individual features
[3] Biomass calculated by use of allometric scaling formulae (see Reitz and Scarry 1985:67). Calculations achieved by summing individual features

Table 2- Continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Birds					
Canada Goose, *Branta canadensis*	2	5.3	2	0.093	0.19
Mallard/Black Duck, *Anas platyrnynchos / rubripies*	1	0.6	1	0.013	0.02
Duck species, Anatinae	7	3.2	4	0.059	0.12
Domestic Chicken, *Gallus gallus*	2	1.5	2	0.029	0.06
Ruffed Grouse, *Bonasa umbellus*	1	0.9	1	0.018	0.04
Wild Turkey, *Meleagris gallapavo*	4	14.8	3	0.237	0.49
Grouse/chicken/turkey, Galliformes	2	0.3	--	0.007	0.01
Passenger Pigeon, *Ectopistes migratorius*	15	2.2	6	0.042	0.08
cf. Passenger Pigeon, *Ectopistes migratorius*	1	0.1	--	0.003	0.01
Unidentified Bird	85	21.2	--	0.329	0.66
Sub Total	120	50.1	19	0.830	1.68
Fish					
Lake Sturgeon, *Acipencer fulvescens*	1	0.1	1	0.005	0.01
Unidentified Fish	3	0.3	--	0.011	0.02
Sub Total	4	0.4	1	0.016	0.01
Reptile					
Blanding's Turtle, *Emydoidea blandingii*	2	3.9	1	0.079	0.16
Semiaquatic pond turtles, Emydidae	4	2.2	--	0.054	0.11
Unidentified Turtle	2	0.6	--	0.022	0.04
Sub Total	8	6.7	1	0.155	0.31

Table 2- Continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Amphibians					
Frog/toad sp., Anura	1	0.1	1	--	--
Sub Total	1	0.1	1		
Unidentified Vertebrata	842	69.4	--	--	--
Bivalves					
Spike, *Elliptio dilatata*	2	6.3	2	--	--
Unidentified Bivalve	9	6.5	--	--	--
Sub Total	11	12.8	2		
Grand Total	2720	3691.7	81	49.576	100.00

consisting of grouse, chickens, and turkeys. Passenger pigeon provided the highest number of identified bird specimens with 15 and this accounts for 42.9% of the bird NISP count (Table 2). However, the larger birds such as Canada goose and especially wild turkey boast much higher percentages of NISP weight than does the small bodied passenger pigeon.

Surprisingly, only four fish specimens were recovered from feature contexts in the 2002 excavations, and of these, only one could be identified to the species level (Table 2). The paucity of fish in the assemblage is unexpected considering the fort's proximity to the St. Joseph River, the known seasonal abundance of lake sturgeon in the river from pre-contact sites, and the general pattern of French subsistence at colonial sites where fish was generally a substantial portion of the diet especially during late spring and early fall spawning runs (Bettarel and Smith 1973; Cleland 1966; Martin 1986, 1991a; Martin and Richmond 2001; Scott 1985). Blanding's turtle specimens combined with four specimens of unidentified semi-aquatic pond turtles (*Emydidae*) comprise the identified specimens representing reptiles in the assemblage. One bone from a frog or toad species (Anura) was identified, and bivalves consisted of two specimens of spike (*Elliptio dilatata*) and nine unidentified freshwater mussel shell fragments.

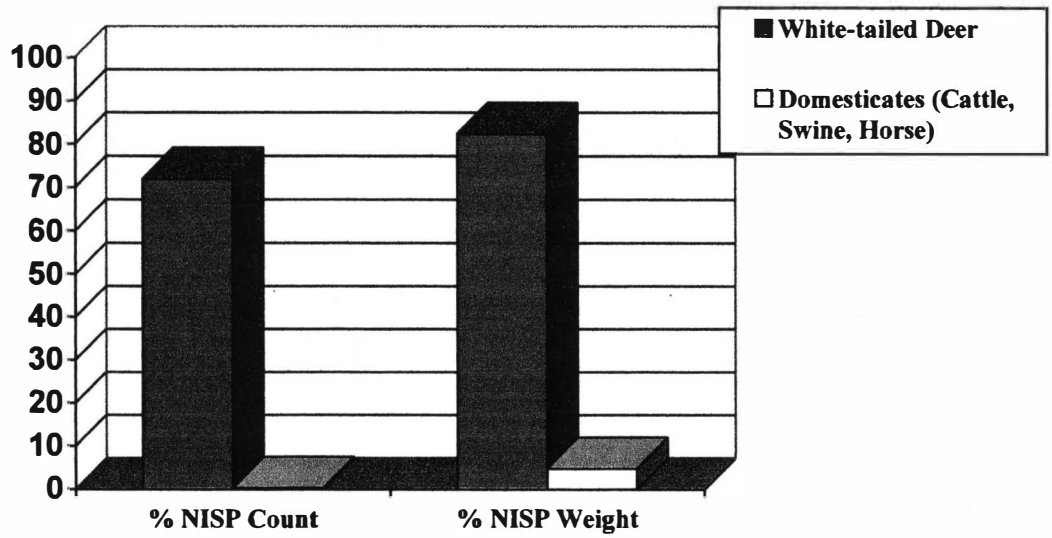

Figure 3- Graph: Total NISP % for White-Tailed Deer vs. Domesticates at Fort St. Joseph

Minimum Number of Individuals

In total, eighty-one individuals were identified from feature contexts (Table 1). Of these, nearly 75% (n= 57) were identified as mammalian, 20% as bird (n= 19), 3% as bivalve (n= 2), >1% as fish (n=1), >1% as reptile (n=1), and >1% as amphibian (n=1) (Figure 2). This method accounts for only the 367 specimens that have been identified to the species level. Specimens that could not be identified more specifically than class were not given MNI consideration.

The highest proportion of individuals from mammal species was again white-tailed deer. These specimens represent 29 individuals of the total 57 mammal individuals. 52% of the mammal individuals are represented by white-tailed deer while cattle, horse, and pig represent a combined 7% (n=4). Thus, the MNI figures support NISP findings that place a strong emphasis on wild game as opposed to domesticates. Other mammal species represented include 10 raccoons, 5 black bears,

3 porcupines, 3 beaver, and a single individual of both eastern cottontail rabbit and canis species (dog, wolf, or coyote).

Nineteen individuals were identified as bird specimens and of these, six are passenger pigeons. The only domesticated species of bird in the assemblage, domestic chicken, is represented by two individuals. Other birds include: four ducks, three wild turkeys, two Canada geese, and one ruffed grouse. For the other classes of vertebrates, fish individuals are represented by one lake sturgeon, reptiles are represented by one Blanding's turtle, amphibians are represented by one frog or toad, and two individuals of spike make up the bivalves.

A breakdown of total MNIs that compares white-tailed deer to all domesticate mammal species (including horse, pig, and cattle) shows 38% (n= 29) white-tailed deer and 8% (n= 4) domesticates (Figure 4). Here again white-tailed deer prove to be the major contributor to the assemblage from feature contexts.

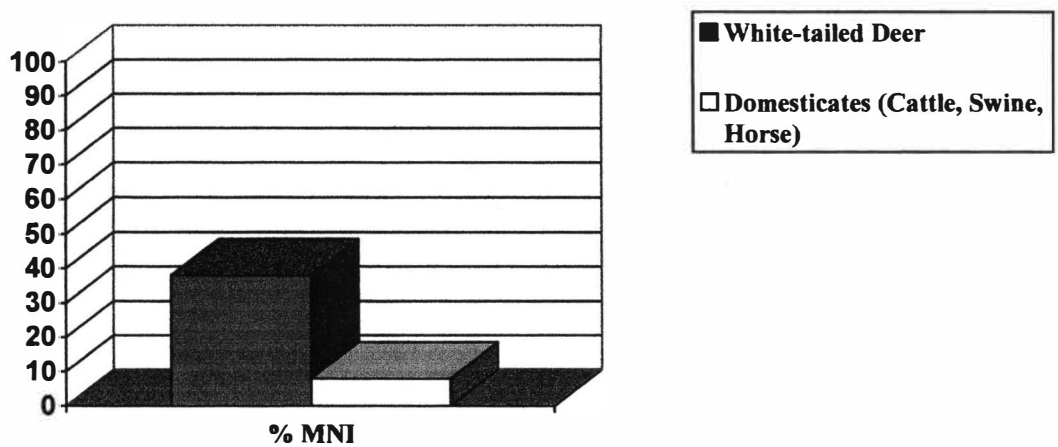

Figure 4- Graph: Total MNI % for White-Tailed Deer vs. Domesticates at Fort St. Joseph

Biomass Estimates

Biomass estimates show a total meat contribution of 49.576 kilograms for the identified specimens represented by feature contexts (Table 1). The biomass was calculated for mammals, birds, fish and reptiles while amphibians, bivalves and the unidentified vertebrata classes were excluded from this method. Mammals represented the majority of biomass contribution with 97.9% (n=48.575 kg), followed by birds with 1.7% (n= 0.830 kg), reptiles with 0.3% (n=0.155 kg), and fish with 0.1% (n=0.016 kg) (Figure 2).

The biomass results show a drastic difference in the contribution of wild vs. domesticated mammal species. White-tailed deer contributed 50.2% of the total biomass while domesticates (horse, swine, and cattle) combined for 6.2% (Figure 5).

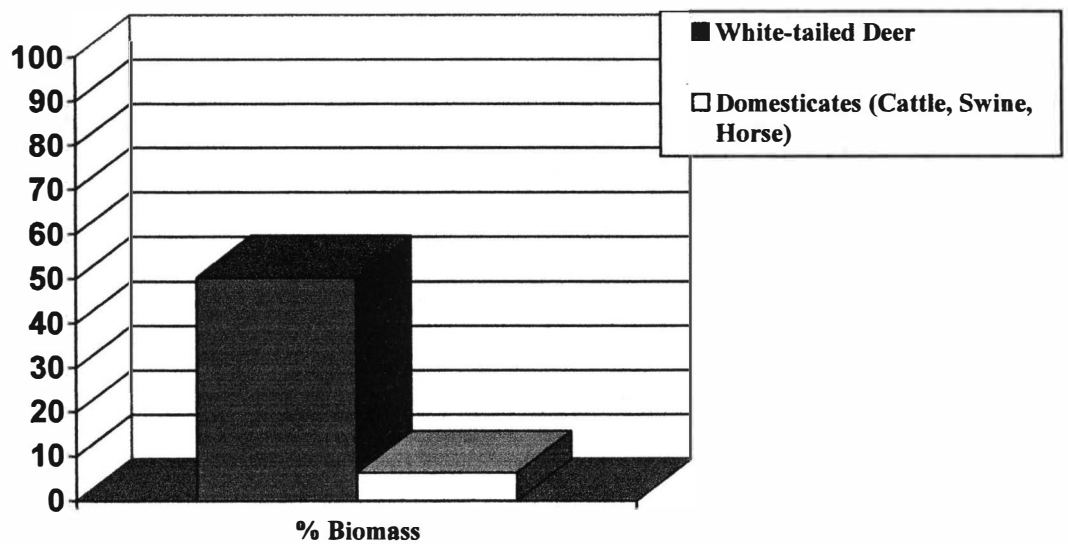

Figure 5- Graph: Total Biomass % for White-Tailed Deer vs. Domesticates at Fort St. Joseph

Summary

White-tailed deer consistently provided the major contribution to the assemblage for all three methods employed (Figures 3, 4, and 5). Percentages of total contribution for white-tailed deer are 71.9% NISP count, 38% MNI, and 50.2% of the biomass. Domestic species provided a combined result of 6.6% NISP count, 6% MNI, and 6.2% of the biomass (Figure 6). These results consistently place wild game species, represented here by white-tailed deer, as significantly more important than all domesticates in terms of dietary contribution.

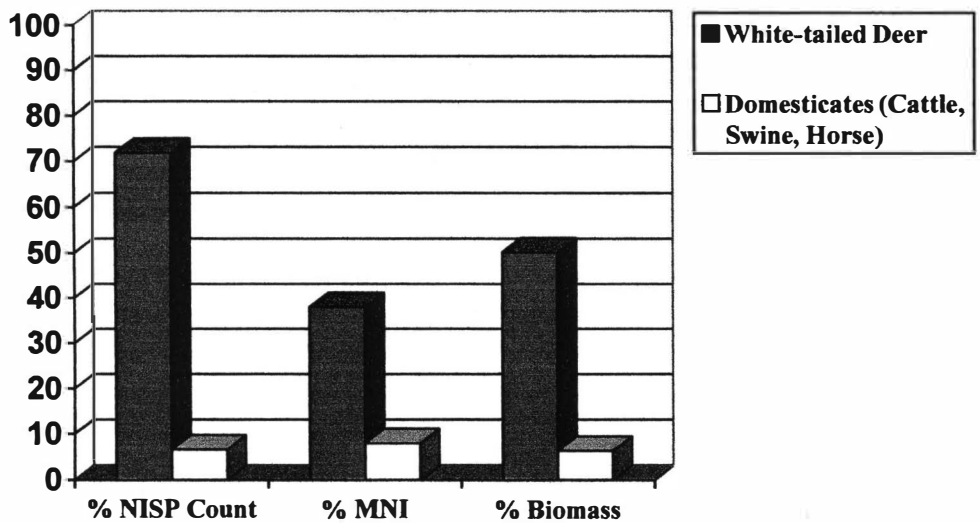

Figure 6- Graph: Total NISP Count, MNI, and Biomass % for White-Tailed Deer vs. Domesticates at Fort St. Joseph

The strong dependence on local wild animal species exhibited in the Fort St. Joseph faunal assemblage closely resembles contemporary Native American patterns of animal exploitation. These findings indicates that selective consumption was not

being utilized to create and maintain social distance, and thereby express European cultural identity, at this site. An explanation for this occurrence includes the necessity for occupants of Fort St. Joseph to establish close relations with local Native populations, possibly through inter-marriages (Sleeper-Smith 2001). Considering their remote position, small numbers, and limited access to imported goods, colonists at the fort would have found strong relations, personal and otherwise, very favorable for both economic and social reasons. These unions not only strengthen alliances between traders and Natives in the present, but also assure continued prosperity through the *métis* sons and daughters that result from these marriages. Through these types of informal relationships, shared meaning and new cultural practices come about through mutual accommodation between European and Native American peoples at Fort St. Joseph (White 1991). The physical presence of Native peoples at Fort St. Joseph can be recognized through the examination of animal exploitation patterns which provide a strong indicator for Native influences in everyday life.

This chapter has presented the results of the analysis of the faunal remains from the Fort St. Joseph site. This location shows a dependency on white-tailed deer over domesticates which is consistent across all three methods of analysis (Figure 6) and clearly represents a pattern of animal exploitation at Fort St. Joseph that relied heavily upon local wild animal resources. The next chapter will provide a comparison of the results from this site to faunal assemblages from other French colonial sites that have been subjected to the same methods of analysis.

CHAPTER VI

INTER-SITE COMPARISON OF RESULTS

The results of the analysis of faunal remains from the Fort St. Joseph site were detailed in the last chapter. This analysis shows a strong dependency on local wild game as the staple for animal exploitation at the site and does not indicate that selective consumption of animal resources was utilized as a marker of cultural identity at this site. In this chapter, I will compare these results with faunal assemblages from Fort Ouiatenon, French Cahokia, Fort de Chartres I, and Fort de Chartres III using the same methods of analysis in order to establish a general pattern of animal exploitation from all five of these sites.

The sites used in this comparison have been selected due to their similar environmental settings, though they exhibit differences in social conditions. Variation in subsistence patterns between these sites may provide information as to the different ways European pioneers interacted with Native Americans and their environment in day-to-day activities at each location (Cleland 1970; Jelks et al. 1989; Martin 1986, 1988; Scott 1985).

Fort Ouiatenon

Fort Ouiatenon, located in Indiana's Wabash Valley, served as a trading post for the French during the eighteenth century. The scale of this outpost was similar in both size and function to Fort St. Joseph and they occupied very similar

environmental settings. In addition, both locations functioned as local distribution centers according to Tordoff's (1983) model of the French colonial fur trade network. Established in 1717 in present day Tippecanoe County, Fort Ouiatenon housed a small detachment of French marines and between twelve and twenty families at any one time (Martin 1986). Native American populations in the area included Kickapoo, Wea, Piankashaw, and Mascouten and these groups inhabited five villages in the surrounding area. A strong Native American presence and remote location also creates favorable conditions for the formation of kinship ties through intermarriage which would strengthen trade and security in the area (Sleeper-Smith 2001). Like Fort St. Joseph, Fort Ouiatenon was commandeered by the British in 1761 and taken by Native Americans in 1763 during Pontiac's Rebellion. The British never re-garrisoned Fort Ouiatenon following the 1763 attacks and the outpost was manned by resident French fur traders and their families until its destruction in 1791 by American forces (Martin 1991b).

The near parallel history of the two forts combined with their location in very similar social and environmental settings provides the opportunity for a strong comparison to be made between Fort Ouiatenon and Fort St. Joseph. Mammal species contributed the major portion of NISP to the Fort Ouiatenon assemblage representing 86% of all remains (n=86,479) while birds (n=10,143), mussels (n=1,042), fish (n=926) and reptiles/amphibians (n=252) were also represented in the total assemblage (N= 100,655) (Martin 1986). Though a wide variety of species are represented, the NISP results consist of mainly mammalian species while all other

classes combined (including specimens not identifiable to a greater degree than Vertebrata) contributed 14% of the total. Bird specimens account for 10% of the NISP and was the second most abundant class in the assemblage (Martin 1986).

Twenty-eight species of mammals are represented in the Fort Ouiatenon assemblage, though white-tailed deer, domestic pig, black bear, cattle, bison, raccoon, and beaver account for 94.4 % of the total mammalian specimens for NISP (Martin 1986). These same species represent 78.6% of the mammal MNI and 96.7% of the calculated biomass totals for mammals. The 5,072 elements that were identified as white-tailed deer with an MNI of 139 individuals out of 7,142 identified mammal specimens and total mammalian MNI of 263 individuals identifies white-tailed deer as the staple animal species exploited at Fort Ouiatenon (Martin 1986). A comparison of domestic species (consisting of cattle, swine, and horse) in relation to the white-tailed deer specimens shows the significance of wild game, especially white-tailed deer, in colonial diets at Fort Ouiatenon. Domesticates represent 6.7% NISP, 6.1% MNI, and 35.6% of the biomass while white-tailed deer alone accounts for 43.6% NISP, 52.8% MNI, and 51.1% of the biomass in the assemblage (Figures 7, 8, and 9).

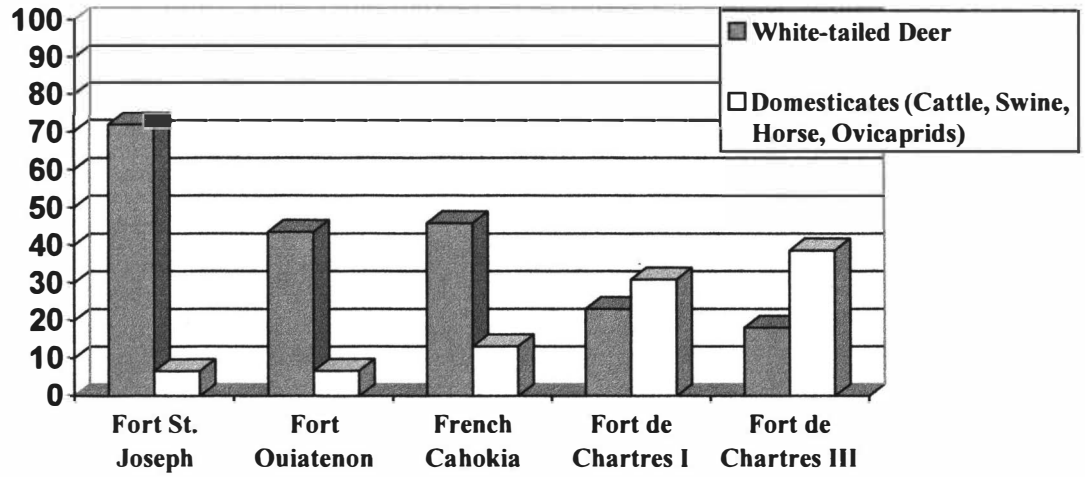

Figure 7- Graph: NISP Count % for White-Tailed Deer vs. Domesticates at All Five Sites

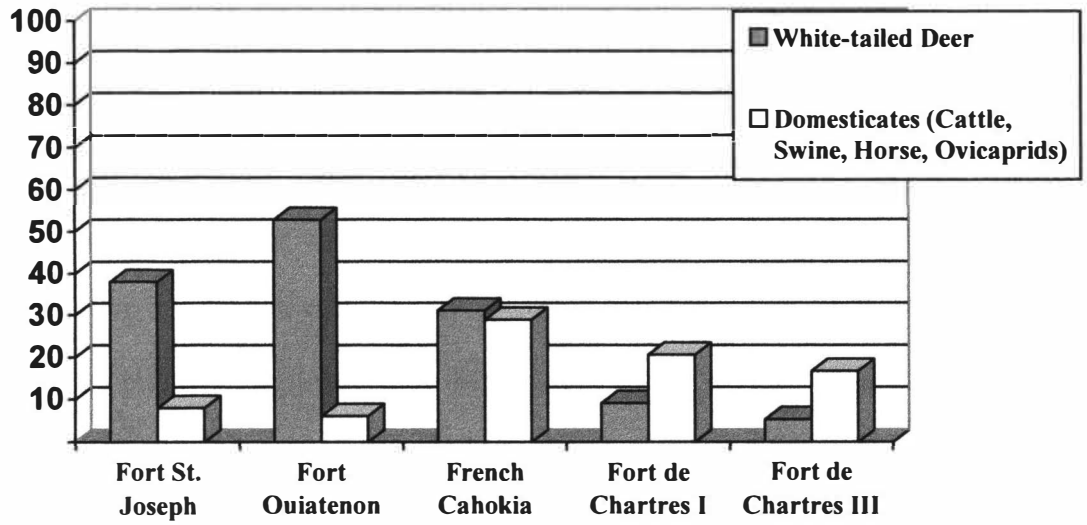

Figure 8- Graph: MNI % for White-Tailed Deer vs. Domesticates at All Five Sites

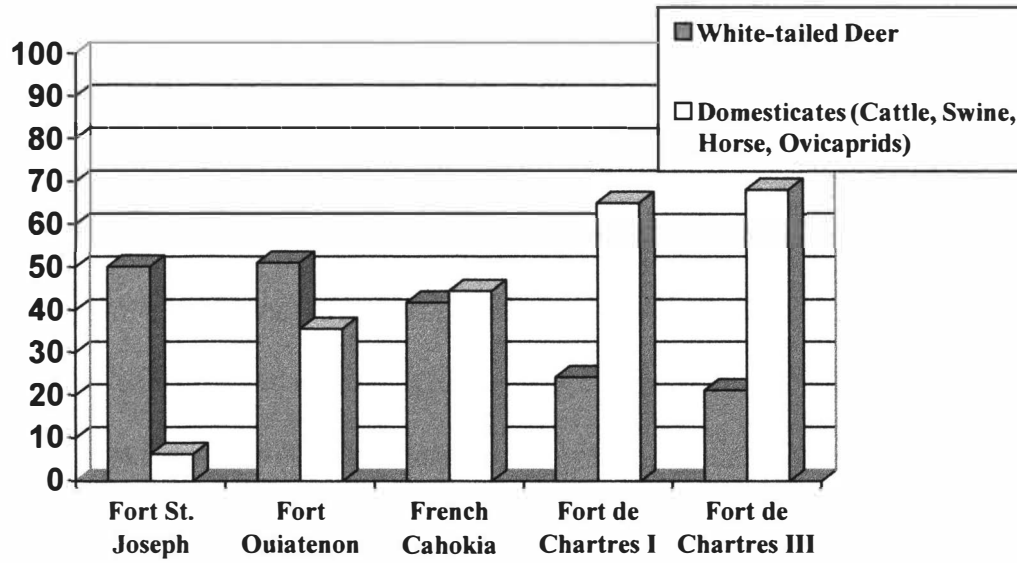

Figure 9- Graph: Biomass % for White-Tailed Deer vs. Domesticates at All Five Sites

Bird specimens account for 10% NISP of the total assemblage and consist of forty-six species including wild turkey, ducks, Canada goose, swan, and passenger pigeon (Martin 1986). Wild turkey is the most abundant single species exploited in terms of MNI and is second only to the combined total of all duck species. However, the greater amount of meat yielded per individual makes wild turkey the most significant avian species exploited at Fort Ouiatenon. Waterfowl, grouped as ducks, Canada goose, and swan, approach the totals for wild turkey in terms of dietary importance while additional contributions were made by passenger pigeon and prairie chicken (Martin 1986). Domestic chickens total 17 individuals that are represented by 300 specimens and the importance of this species may be seen in terms of both meat yield and the production of eggs for consumption.

Fish remains may be underrepresented in this assemblage due to the lack of a systematic approach to small-scale recovery during excavations (Martin 1986). The

representation of fish in the assemblage collected from Fort Ouiatenon may in part be influenced by a bias in the field recovery techniques that selected for larger skeletal elements (Martin 1986; 1991b). Fish species identified in the assemblage include catfish, redhorse, shovelnose sturgeon, and black bass. All fish species combined account for 0.9% NISP and 0.7% of the biomass of the assemblage as a whole. Though over 1,000 freshwater mussel shells were collected, they account for only 0.1% of the total biomass at Fort Ouiatenon. However, the presence of this high number of shell fragments is more similar to patterns of contemporaneous Native American subsistence strategies and may in fact provide strong evidence for a close relationship between natives and colonists at this fort (Martin 1991b).

The Fort Ouiatenon site (12T9) in Indiana and Fort St. Joseph share many similarities in terms of history, social conditions, and environmental setting. Additionally, the faunal assemblages at these sites demonstrate strong dependencies on wild game species as opposed to domesticates. This closely resembles Native American animal exploitation patterns and indicates low levels of social distancing and high instances of mutual accommodation. These similarities provide a strong indicator for a native presence at both locations, perhaps in the form of Native American wives and *métis* populations, which are expressed in the subsistence patterns. The animal exploitation patterns at Fort Ouiatenon, like Fort St. Joseph, fail to provide evidence for the use of selective consumption of animal resources as a marker of European cultural identity.

French Cahokia

A pattern of reliance on wild species at locations that are not major government and military centers is also supported by the faunal assemblage recovered from French Colonial Cahokia. Animal exploitation patterns at the Cahokia Wedge site (11S743) in St. Clair County, Illinois, generally reflect those found at Fort Ouiatenon and Fort St. Joseph in terms of species diversity, but with a marked increase in dependence on domesticated species and decrease in freshwater mussel shell fragments (Martin 1988). This French village located along the Mississippi River shows a reliance on wild game species although the inhabitants raised both domesticated crops and animals for income as well as subsistence. Mammal species make up 86% of the assemblage with white-tailed deer being the most numerous. White-tailed deer bones accounted for 45.9% of the total NISP, 31.1% MNI and 41.8% of the biomass for all identified taxa (Martin 1988) (Figures 7, 8, and 9). Additional mammals include swine, beaver, black bear, bison, and canid species with waterfowl, marsh birds, turtles, and large blue catfish supplementing the diet as well. Domesticated mammal species comprised 13.2% NISP, 28.9% MNI, and 44.5% of the biomass calculated for the assemblage with proportions similar to white-tailed deer in both NISP and biomass calculations. These results show a significant increase in domesticates when compared with the white-tailed deer vs. domesticated animal ratios at Fort Ouiatenon and Fort St. Joseph. This observation tends to support Cahokia's role as an agricultural center with access to the regional distribution center (Tordoff 1983) of Fort de Chartres to the south. Conversely, less cooperation with

local native groups for subsistence purposes than at more rural outposts is suggested for this settlement. The greater dependence on domesticates may be a function of Cahokia's access to local domestic animals and may simultaneously be an expression of cultural identity and the desire to maintain social distance. The patterns of animal exploitation at French Cahokia have elements of both European and Native American influences, and so does not seem to indicate that subsistence at this site can be viewed as a marker of cultural identity.

Fort de Chartres I

Initially constructed in the years 1719-1720, Fort de Chartres was intended from its inception to function as a regional distribution center for the Illinois Country and the Louisiana Colony. The Laurens site (11R125) represents the original Fort de Chartres (Fort de Chartres I) and was the first of three incarnations of the fort. The first two were constructed with wooden palisades and the third (Fort de Chartres III) was made with walls of stone (Jelks et al. 1989). Fort de Chartres I is located approximately 1 km to the south of the Fort de Chartres State Historic Site which is the location of the stone structure built in 1753 (Keene 1988). Fort de Chartres II was constructed in the late 1720s near the first fort and while it was slightly smaller in size, the double palisade and four bastions made for a more secure defense against persistent attacks from the Mesquakie Indians (Keene 1988).

The faunal assemblage collected at the Laurens site is similar to that of French Cahokia in that mammals contribute the majority of specimens, 70% of the NISP

total, though bird species represent a much higher percentage (25%) of the NISP than at the previous three sites (Jelks et al. 1989). The assemblage displays a wide range of species exploitation with fifty vertebrate taxa being represented in the 6,137 specimens collected. The residents of Fort de Chartres I were utilizing the Mississippi River channel for subsistence as nearly 75% of the identified fish remains are accounted for by large blue catfish (Jelks et al. 1989). This, however must be contrasted with the 3.6% that fish as a class represent in the total NISP for the entire assemblage. At this regional distribution center, the contrast between white-tailed deer specimens and those representing domesticated species is apparent. White-tailed deer account for only 23.1% NISP, 9.1% MNI, and 24.3% of the total biomass while domesticates make up 30.9% NISP, 20.6% MNI, and 65.1% of the biomass (Figures 7, 8, and 9). The animal exploitation strategies at a commercial location such as Fort de Chartres I reflect European origins to a much higher degree than the outlying areas of the Illinois Country and Great Lakes region. This is not only a reflection of increased availability of domesticated species at larger commerce centers, but also depicts a more segregated way of life for colonists where interaction with native allies may not have been essential for day-to-day activities which is in turn reflected in the foodways. In fact, the very existence of three Fort de Chartres, each of which built stronger and more resilient that the one before, suggests that European and Native American relations at this location were often realized in the form of warfare. Violence in the fur trade broke down alliances and impeded trade relations which inhibited intermarriage and promoted weak kinship networks at this location.

Subsistence patterns for colonists at Fort de Chartres I do display a marked difference from native patterns and this site provides evidence for the use of selective consumption of animal resources as a means of maintaining social distance and expressing cultural identity.

Fort de Chartres III

The faunal assemblage from Fort de Chartres III (11R127) shows this trend of domesticated over wild game representation to an even greater degree. Established some 25 to 30 years after Fort de Chartres I and occupied until the end of the eighteenth century (Keene 1988), excavations from the stone fort reveal animal exploitation patterns for domesticates at 38.7% NISP, 16.7% MNI, and 68.2% of the biomass in comparison to 18.1% NISP, 5.3% MNI, and 21.2% of the total biomass being comprised of white-tailed deer remains (Keene 1988). This is the highest proportion of domesticates of the five sites discussed in this section (Figures 7, 8, and 9). The pattern of animal exploitation at this site provides a strong indicator for manipulation of subsistence patterns as a means of maintaining social distance and marking cultural identity. However, it should be noted that the large population and continuous occupation of this site may also have had an adverse affect on local wild animal species, such as white-tailed deer, due to hunting practices. Game species populations may have diminished over time and this explains the exploitation of domesticated resources out of necessity, rather than selective consumption. At this

point, it is unclear if this is indeed a plausible explanation for the higher proportions of domesticated species.

By comparing the faunal assemblages from French colonial sites located in the Illinois Country, a pattern of animal exploitation begins to emerge. For each site, mammalian species dominated the assemblage with supplemental exploitation of bird, fish, and some reptile/amphibian and freshwater mussel species. White-tailed deer remains are often the best represented single species in the analysis, however there is clear evidence for a correlation between an increase in military presence and political control, which increases internal social stratification, at a site and the site's dependence on domesticates as seen in the faunal assemblage. Locations that are ranked higher in Tordoff's (1983) hierarchy, which reflects an increase in internal complexity, exhibit increased dependence on swine, cattle, sheep, and goats while sites in the hinterland of the Illinois Country and Great Lakes Region tend to show a heavy dependence on wild game species as a staple of the diet. The specific strategies for subsistence away from regional centers reflect those of local Native American groups more so than at the larger sites.

This pattern is not assumed to be solely due to differences in the availability of domesticated species. Colonists at rural forts could have obtained domestic species and maintained a herd of animals and colonists at larger forts could have hunted wild game species instead of purchasing domestic products. An economic and optimal foraging explanation for the patterns of subsistence detailed above does not take into account the drastic differences in demographics at each location and fails to

acknowledge the kinds of people who inhabited each location. To illustrate this point, ask yourself "If the Governor of New France lived at Fort St. Joseph, would the animal exploitation patterns be different?" The traders and civilians living in remote areas such as Fort St. Joseph and Fort Ouiatenon were not often from the upper echelons of French society (Cleland 1970). Many, if not most, had never been to France and so would have been accustomed to the local animal resources available in these locations. The high proportions of domestic species recovered from Fort de Chartres I and III has as much to do with the status of these site's occupants as does the general availability of domesticated animals.

Local native groups interacted with the European traders in order to obtain the goods they desired from Old World markets while traders were interested in the hides and furs that Native Americans had to offer. Natives possessed knowledge about the land and local animal resources while colonists brought items such as beads, knives, and gun parts for musket repair. This interaction is one of cooperation where each side has something to offer the other, however, traders had to become part of the extensive Native American kinship network in order to access this market (Sleeper-Smith 2001; White 1991). Through intermarriages between European traders and native women, outsiders are brought into the local system of exchange. Kinship ties were essential to the way Native Americans related to one another in the Great Lakes region and incorporating Europeans into a community through marriage provides a basis for native peoples to understand a trader's position within their own worldview. "This was a face-to-face world in which people were identified by their relatives and

where the individual was suspect. ...It was the reputation and prominence of kin networks that defined social acceptance and prominence" (Sleeper-Smith 2001:43). The new kinship network established through the marriage of French fur traders to native women not only facilitated the expansion and success of the fur trade in this region, but served as a means of bringing two different and diverse peoples together through the process of White's (1991) mutual accommodation.

Another factor at work in the Great Lakes fur trade was the conversion of Native Americans to Catholicism. Baptismal records show how the work of Jesuit missionaries had an effect not only on the religion of native peoples, but also on how they incorporated Europeans and religion into their kin-based system of understanding the world (Sleeper-Smith 2001). The naming of Godparents at the time of a child's baptism provides another way to establish a kinship tie where marriage and "blood" relations are not possible. Often times, a commandant would serve as the Godfather to several *métis* children while a prominent woman of native or mixed ancestry would be named the Godmother (Sleeper-Smith 2001). This practice ensured the child, and the extended family, access through kin relations to both worlds of European colonialism and Native American tradition.

The flexibility of kin networks established through inter-marriage and the "Catholic" kin system creates the opportunity for shared meaning and a blending of distinct cultural identities (White 1991). This blending of cultural traditions with a French trader, native wife, and *métis* children all incorporated into one household (Sleeper-Smith 2001) should be reflected in the material culture and is argued, in this

study, to be reflected in the foodways. Locations where trade was the primary function of a community and where these mixed households comprised a large portion of the residents produce subsistence patterns that reflect integration and mutual accommodation. Fort St. Joseph and Fort Ouiatenon represent these types of communities where kin relations, as opposed to strict colonial rule, dictated people's actions. The animal exploitation patterns at these sites do indeed reflect this sort of integration. Alternatively, the demographics at sites like Fort de Chartres I and III were composed of more high ranking military and governmental officials who were less likely to be concerned with native kinship ties. Mixed households, while certainly present, would not have comprised the majority and so subsistence patterns are more similar to a European agricultural way of life.

Customs that manifest themselves in the New World, but were not found in France of the time, can be said to represent a shift in the way Europeans viewed themselves and so represents a shift in cultural identity as well. In turn, Native Americans were experiencing the same sort of effects through the incorporation of Catholicism into their kin-based understanding of the world. While the colonist and traders probably did not perceive of themselves as Native American, so too did they not see themselves simply as frontier versions of eighteenth century Parisians. Native American converts to this new Catholic religion found themselves in a unique position where they could access both European and Native traditions. White (1991) makes the argument that this shift, on both sides, results in a new situation which is neither European nor Native American but contains elements of both cultures. The

middle ground represents a mutual accommodation where by values and customs shared by colonists and Natives take on new meanings unique to the setting of the fur trade (White 1991). Archaeological representation of this shift in identity may be manifest on colonial sites through many aspects of material culture. Locally produced brass and copper tinkling cones crafted from kettles, modified animal bones resembling native tools, clothing, ceramic, beads, and may other aspects of daily life, in addition to subsistence practices, may reflect the blending of European and Native traditions which White (1991) calls the middle ground.

In this study, animal exploitation that closely resembles Native American patterns was identified at sites with lower internal social stratification, such as Fort St. Joseph and Fort Ouiatenon, where European integration into native kin networks would have been essential. At larger governmental sites where people of higher social status were more common, the need to rely on native allies for trade and everyday activities was less pronounced. This has been reflected in the faunal assemblages recovered at Fort de Chartres I and III. French Cahokia occupied a position between these other locations as it was a rural, agricultural community with access to the larger center of Fort de Chartres. The faunal assemblage from this site also reflects a middle position where clear expressions of European or Native patterns are not identified.

This study has used the animal exploitation patterns from several French colonial sites across New France and Upper Louisiana (Walthall 1991) to examine the issue of cultural identity as realized through foodways for colonists who faced similar

environmental settings with different social conditions. Those sites that were under stronger influence from the colonial government exhibit animal exploitation patterns which are primarily dependent on domesticated species such as those found in Europe. Cattle, pigs, horse, sheep, and goats comprised the staple dietary contributions at Fort de Chartres I and Fort de Chartres III. Moving away from centers of the colonial government to Fort Ouiatenon and Fort St. Joseph, the animal exploitation patterns more closely resemble those of local Native peoples with an increase in the dependency on wild game species. The faunal assemblage from French Cahokia, a rural agricultural community, shows elements of both European and Native patterns. As interactions with local Native American populations took place on a much more personal level at remote locations, European colonists were taking on more of the habits associated with Native Americans and this is reflected in the animal exploitation patterns. The transition from formal interaction to personal interdependencies in a kin-based network of exchange (Sleeper-Smith 2001) results in greater degrees of shared values and meanings (White 1991) which are then reflected in the material culture (Wise 2001), and in this case animal exploitation patterns, of people living on the eighteenth century frontier.

CHAPTER VII

CONCLUSION

Cultural identity can be expressed in a myriad number of ways. It is often created and maintained through mundane activities of daily practice. In order to serve as markers of cultural identity, these practices must be contrasted to those of neighboring groups. Although identity is often context dependent, prolonged interaction between those of different cultures creates the opportunity for shifts in the way people perceive themselves. Intermarriage between French traders and Native American women, and the resulting *métis* population, is an example of how informal interaction can be manifest. Material culture may reflect this blending of cultures and by identifying patterns that display different frequencies of certain objects it becomes possible to explore issues of cultural identity across multiple sites (Nassaney 2001; Shennan 1994). One such pattern becomes apparent when comparing interactions between French and Native Americans at five different sites across the Great Lakes region and the Illinois Country. Animal exploitation patterns at each of these locations varied depending on the social conditions, demographic make-up, and in turn, the types of interactions taking place between the two groups.

This study examined animal exploitation as a possible means of identifying a pattern of consumption that reflects discrete cultural identities in the types of interactions between European colonists and Native peoples that were dependent upon the social setting and demographics of the site. In some contexts, food could be

identified as a marker that helps create and maintain social boundaries, though not in others. As one moves away from governmental centers, animal exploitation strategies of colonists more closely resemble those of local Native peoples. This is seen in the high proportion of wild game species and very few domesticated animals in the assemblages at Fort Ouiatenon and Fort St. Joseph. In comparison, a higher dependency on domesticated animals was expressed at Fort de Chartres I and III. French Cahokia occupies a position in between these two extremes. While this agricultural community was not a major government center nor military bastion, its close proximity to Fort de Chartres allowed residents of the community to benefit from the inflow of goods at the regional distribution center. Exporting locally grown crops and domestic animals was also important to the economy at French Cahokia and the American Bottom area has been called the breadbasket of the New World for the French colonies (Jelks et al. 1989; Walthall 1991). As such, the faunal assemblage recovered from the Cahokia Wedge site at French Cahokia displays a greater dependency on wild game species than Fort de Chartres I and III but is less pronounced than was observed at Fort Ouiatenon and Fort St. Joseph. NISP, MNI, and biomass data recovered from these five sites consistently shows greater dependency on local wild game species for animal exploitation as one moves away from large centers of European occupation.

French colonists at larger governmental centers were maintaining a tradition of animal exploitation that reflects their European roots. Maintaining domestic animal species in the New World would have generally been at greater expense in

comparison to the readily available local wild animal species, though pigs were often allowed to run feral and then hunted like wild game. Domestic animals must be purchased, fed, and in most cases monitored to assure that they can be harvested at a later time. Currently, there is no indication that the wild game species were less plentiful at the larger forts, however the patterns of animal exploitation demonstrated through a comparison of Fort de Chartres III, Fort de Chartres I, French Cahokia, Fort Ouiatenon, and Fort St. Joseph shows that those colonists at the larger forts were maintaining consumption patterns that express their desire to eat domesticated species. This display of selective consumption indicated that exploitation of animal resources may have acted to maintain social distance and mark cultural identity for Europeans at these locations.

Smaller forts located on the edge of the frontier, such as Fort Ouiatenon and Fort St. Joseph, would have required colonists to work very closely with native groups as part of daily activities (Sleeper-Smith 2001). These interactions often included intermarriage and as such the subsistence patterns found at smaller outposts more closely resemble those of the Native Americans due to their mixed demographics. Additionally, colonists in remote locations may have had limited access to domestic species and so were forced to live off of the land to a greater extent, though obtaining domestic species would still have been possible. However, it is the opportunity for colonists at these locations to consume domesticated animal species over wild game that creates an interesting situation. The faunal assemblages recovered from governmental centers, like Fort de Chartres I and III, reflect

established traditions of European animal exploitation which created the opportunity for social distancing and expression of cultural identity through foodways. Sites like Fort St. Joseph and Fort Ouiatenon displayed animal exploitation patterns that rely on local wild game and this shows less concern with maintaining social distance. The importance of kinship relations through intermarriage and *metis* populations in these communities helps to explain the extent of informal relations and emphasizes the disadvantages associated with maintaining social distance (Sleeper-Smith 2001).

While this study has focused on the use of animal exploitation as an indicator of cultural identity in New France, it has not addressed other important factors that could further add to our understanding of life at these locations. The use of Food Utility Indices would allow for an examination of butchering practices at the site and perhaps information concerning dietary consumption from the various species could be determined from this method of analysis (Gust 1993). With the information provided by Food Utility Indices it may be possible to explore issues of butchering practices between Native Americans and Europeans which would test the idea that colonists were adapting to new environments through interaction with native peoples.

Also, an analysis of contemporary Native American communities that were in close proximity to these sites may provide interesting data concerning the Native adaptation to European expansion into the American interior. By exploring the expression of cultural identity through foodways for Europeans in the eighteenth century, this study has failed to detail similar issues for Native Americans who were living near these sites during this time period. A comparative analysis of Native

occupations associated with colonial communities, such as the large Potawatomi settlement across the river from Fort St. Joseph and the known native villages in proximity to Fort Ouiatenon, would better inform our understanding of this middle ground and give a more complete picture of life in the Great Lakes fur trade

The ideas presented in this study open up a range of possibilities for further research. As excavations of the Fort St. Joseph site (20BE23) proceed, it will be possible to continue the sort of analysis laid out through this study with a more complete understanding of the site's stratigraphy, arrangement, and provenience. Artifact analyses of the features may allow for the association of specific features with French or British occupations representing a change over time. These differences can then be used to examine different subsistence strategies adopted by the European colonial powers as has been explored at Fort Michilimackinac (Cleland 1970).

Based on the analysis of animal remains recovered from Fort Ouiatenon and other French colonial sites (Jelks et al. 1988; Martin 1986), it was expected that there would be an abundance of fish remains in the assemblage. The St. Joseph River was known to support large seasonal populations of lake sturgeon which were exploited by Native peoples at the nearby Moccasin Bluff and Wymer West Knoll sites (Bettarel and Smith 1973; Martin and Richmond 2000). However, the analysis of animal remains from features at Fort St. Joseph has revealed only a single fish specimen identifiable to the species level. Three other specimens were identified to the class level and these, together with the single lake sturgeon specimen, account for the total fish count. At this early stage of excavation, it is premature to assume that

the French were not taking advantage of this readily available food resource as there seems to be no indication for a drastic decline in the presence of fish in the St. Joseph River during the colonial period. Also, the excellent level of preservation for all animal bone specimens recovered from this site, in addition to the near neutral results of soil acidity tests conducted on the sediments at the Fort St. Joseph site (Lynch 2003), indicate that taphonomy is not responsible for the absence of fish remains. It is suggested that as excavations proceed on the site, a greater sample of fish remains are likely to be recovered. The lack of fish at this stage of the excavations is most likely due to sampling error and seasonality in that less than 1% of the site deposits have been examined. Should fish continue to remain absent as excavations continue, the question of fish exploitation patterns at Fort St. Joseph will be of major interest.

This inter-site comparison of the faunal assemblages from French colonial sites is in the initial stages. A pattern of animal exploitation has been shown to exist for the five sites identified in this study, however many more French colonial forts, outposts, and communities are known to exist and the methods of this analysis can be extended to other geographic and socially diverse areas. This study has sought to control for environmental factors, to a certain degree, and focus on differing social conditions and so the scope has been limited to the five sites examined above. The addition of French colonial sites from across Canada and the American South may add to the growing body of knowledge concerning French and Native interactions in the New World as expressed through subsistence.

In sum, this study has sought to explore the issue of cultural identity through foodways by examining differential consumption patterns from five French colonial sites in North America. Fort de Chartres III, Fort de Chartres I, French Cahokia, Fort Ouiatenon, and Fort St. Joseph all occupy relatively similar environmental situations though the social conditions at each location vary. By attempting to control for environmental factors, issues related to European and Native interactions at each site are examined through animal exploitation patterns. Selective consumption at the larger governmental centers favored domestic species while remote outposts more closely reflect the subsistence patterns of local native groups. This result is seen to indicate that different types of interactions were taking place at these locations. Kinship networks established through intermarriage, *métis* offspring, and Catholic ritual were essential to the fur trade, and life in general, at smaller outposts where Native peoples and Europeans often occupied the same household. However, larger locations that were prominent in the colonial government do not display subsistence patterns that reflect local native groups. Instead these sites show a strong dependence on domestic animals, such as cattle, swine, horse, sheep, and goats. This type of selective consumption creates social distance between European colonists and Native Americans by the active establishment of cultural identity through animal exploitation. Kinship ties to Native peoples were not as essential for Europeans of higher social status and intermarriage may have been less common in locations with higher degrees of social stratification.

The types of interactions that were taking place on the American frontier in the eighteenth century varied depending on the occupant's social identities, demographic composition of the site, and the activities taking place at each location. For European residents of Fort St. Joseph, daily life demanded close interaction with local Miami and Potawatomi allies which in turn begins to blur the lines that distinguish each group (White 1991). Also, cultural identities begin to merge as Europeans take on Native wives whose children may adopt behavioral traits of both cultures to varying degrees (Sleeper-Smith 2001). What people eat is often an important marker of who they are. Through the study of animal exploitation patterns at these French colonial sites, it may be argued that issues of cultural identity at rural outposts were much more flexible and less rigidly defined than at those locations with a strong governmental and military presence.

APPENDIX A

Skeletal Portions of White-tailed Deer from Feature Contexts at Fort St. Joseph

Element	Number of Elements	%
Antler	1	0.4
Cranium (not including Maxilla)	6	2.2
Mandible	1	0.4
Maxilla	3	1.1
Axis	1	0.4
Hyoid	1	0.4
Teeth	32	11.8
Total Number of Cranial Elements	45	16.6
Vertebra (Cervical 3 – Lumbar)	33	12.2
Ribs	49	18.1
Cartilage	1	0.4
Total Number of Rib-Vertebral Elements	83	30.6
Scapula	13	4.8
Humerus (proximal)	6	2.2
Humerus (distal)	8	2.9
Humerus (shaft fragments)	6	2.2
Radius (whole)	1	0.4
Radius (proximal)	2	0.7
Radius (distal)	1	0.4
Radius (shaft fragments)	6	2.2
Ulna	12	4.4
Total Number of Proximal Forequarter Elements	55	20.3
Innominate	5	1.8
Femur (proximal)	9	3.3
Femur (distal)	8	2.9
Femur (shaft fragments)	13	4.8
Patella	1	0.4
Tibia (proximal)	11	4.0
Tibia (distal)	9	3.3
Tibia (shaft fragments)	18	6.6
Total Number of Proximal Hindquarter Elements	74	27.3
Carpal	3	1.1
Astragalus	1	0.4
Calcaneus	1	0.4
Lateral Malleolus	1	0.4
Metatarsal	4	1.4
Metapodial	1	0.4
Phalanx	3	1.1
Total Number of Lower Legs and Feet	14	5.2
Grand Total	271	100.0

APPENDIX B

Elements Utilized to Calculate Minimum Number of Individuals for Large Mammals from Each Feature at Fort St. Joseph

Feature 1	Element	Portion	MNI
Pig, *Sus scrofa*	Left Metatarsal	Whole	1
White-tailed Deer, *Odocoileus virginianus*	Right Ulna	Proximal	2
Feature 2			
Black Bear, *Ursus americanus*	Right Humerus	Mid Shaft	1
White-tailed Deer, *Odocoileus virginianus*	Right Femur	Mid Shaft to Distal	5
Feature 3			
White-tailed Deer, *Odocoileus virginianus*	Right Femur	Distal	1
Feature 4			
White-tailed Deer, *Odocoileus virginianus*	Right Scapula	Distal	1
Feature 5			
Black Bear, *Ursus americanus*	Left Radius	Proximal	1
Horse sp., *Equus* sp.	Left Metatarsal	Whole	1
Pig, *Sus scrofa*	Left Radius	Proximal	1
White-tailed Deer, *Odocoileus virginianus*	Left Femur	Proximal to Mid Shaft	6
Feature 6			
Black Bear, *Ursus americanus*	Right Metacarpal	Whole	1
White-tailed Deer, *Odocoileus virginianus*	Left Tibia	Mid Shaft	4
Feature 7			
Black Bear, *Ursus americanus*	Phalanx and Atlas	Whole	1
Pig, *Sus scrofa*	Left Scapula	Distal	1
White-tailed Deer, *Odocoileus virginianus*	Left Tibia	Proximal to Mid Shaft	9
Domestic Cattle, *Bos taurus*	Right Scapula	Distal	1
Feature 9			
Black Bear, *Ursus americanus*	Right Rib	Proximal	1
White-tailed Deer, *Odocoileus virginianus*	Left Rib	Proximal	1

APPENDIX C

Species Composition from Individual Features at Fort St. Joseph
Combined Macro and Wet Screen recovery

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Feature 1					
Mammals					
Raccoon, *Procyon lotor*	1	0.2	1	0.006	0.42
Pig, *Sus scrofa*	1	11.9	1	0.244	17.09
White-tailed Deer, *Odocoileus virginianus*	9	58.6	2	1.025	71.83
Unidentified Mammal	10	6.8	--	0.147	10.30
Birds					
Passenger Pigeon, *Ectopistes migratorius*	1	0.2	1	0.005	0.36
Feature 1 Total	22	77.7	5	1.427	100.00
Feature 2					
Mammals					
Beaver, *Castor canadensis*	2	7.6	1	0.163	2.56
Raccoon, *Procyon lotor*	2	1.5	1	0.038	0.59
Black Bear, *Ursus americanus*	1	35.1	1	0.647	10.18
White-tailed Deer, *Odocoileus virginianus*	32	234.8	5	3.577	56.27
Unidentified Mammal	186	100.9	--	1.673	26.32
Birds					
Canada Goose, *Branta canadensis*	1	2.5	1	0.047	0.74
Domestic Chicken, *Gallus gallus*	1	1.1	1	0.022	0.35
Grouse/chicken/turkey, Galliformes	2	0.3	--	0.007	0.11
Passenger Pigeon, *Ectopistes migratorius*	8	1.1	2	0.022	0.35

[1] NISP, number of identified specimens
[2] MNI, minimum number of individuals, maximum distinction method, calculated as sum of individual features
[3] Biomass calculated by use of allometric scaling formulae (see Reitz and Scarry 1985:67). Calculations achieved by summing individual features

Appendix C- continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
cf. Passenger Pigeon, *Ectopistes migratorius*	1	0.1	--	0.003	0.05
Unidentified Bird	54	8.8	--	0.148	2.33
Reptiles					
Unidentified Turtle	1	0.2	--	0.010	0.15
Unidentified Vertebrata	115	5.3	--	--	--
Bivalves					
Spike, *Elliptio dilatata*	1	3.0	1	--	--
Unidentified Bivalve	3	0.1	--	--	--
Feature 2 Total	410	402.4	13	6.357	100.00
Feature 3					
Mammals					
White-tailed Deer, *Odocoileus virginianus*	5	54.9	1	0.967	83.22
Unidentified Mammal	92	8.5	--	0.180	15.49
Birds					
Passenger Pigeon, *Ectopistes migratorius*	2	0.2	1	0.005	0.43
Duck species, Anatinae	1	0.3	--	0.007	0.60
Unidentified Bird	1	0.1	--	0.003	0.26
Bivalves					
Unidentified Bivalve	1	0.1	--	--	--
Feature 3 Total	102	64.1	2	1.162	100.00
Feature 4					
Mammals					
Porcupine, *Erethizon dorsatum*	2	2.6	1	0.062	5.32
cf. Procupine, *Erethizon dorsatum*	1	0.5	--	0.014	1.20
White-tailed Deer, *Odocoileus virginianus*	10	43.5	1	0.784	67.24
Unidentified Mammal	6	10.5	--	0.218	18.70
Birds					
Mallard/Black Duck, *Anas platyrnynchos / rubripies*	1	0.6	1	0.013	1.11
Duck species, Anatinae	1	0.6	1	0.013	1.11
Wild Turkey, *Meleagris gallapavo*	1	2.4	1	0.045	3.86

Appendix C- continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Reptiles					
Unidentified Turtle	1	0.4	--	0.017	1.46
Unidentified Vertebrata	6	0.2	--	--	--
Feature 4 Total	29	61.3	5	1.166	100.00
Feature 5					
Mammals					
Beaver, *Castor canadensis*	3	3.5	1	0.081	0.56
Porcupine, *Erethizon dorsatum*	2	4.2	1	0.095	0.66
cf. Procupine, *Erethizon dorsatum*	1	1.4	--	0.035	0.24
Dog/Coyote/Wolf, *Canis* spp.	1	1.5	--	0.038	0.26
Black Bear, *Ursus americanus*	3	18.5	1	0.363	2.50
Raccoon, *Procyon lotor*	13	16.0	4	0.318	2.19
Horse sp., *Equus* sp.	1	18.1	1	0.356	2.46
Pig, *Sus scrofa*	3	17.2	1	0.340	2.35
cf. Wapiti or Elk, *Cervus elaphus*	1	10.1	--	0.211	1.46
White-tailed Deer, *Odocoileus virginianus*	68	510.9	6	7.203	49.70
Unidentified Mammal	374	356.4	--	5.209	35.93
Birds					
Duck species, Anatinae	2	1.6	1	0.031	0.21
Wild Turkey, *Meleagris gallapavo*	2	7.2	1	0.123	0.85
Unidentified Bird	7	3.8	--	0.069	0.48
Reptiles					
Semiaquatic pond turtles, Emydidae	2	0.6	--	0.022	0.15
Unidentified Vertebrata	4	0.5	--	--	--
Bivalves					
Unidentified Bivalves	1	1.6	--	--	--
Feature 5 Total	488	973.1	17	14.494	100.00

Appendix C- continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Feature 6					
Mammals					
Porcupine, *Erethizon dorsatum*	1	3.3	1	0.077	1.70
cf. Porcupine, *Erethizon dorsatum*	1	0.6	--	0.017	0.37
Black Bear, *Ursus americanus*	1	5.2	1	0.116	2.56
Raccoon, *Procyon lotor*	2	2.6	1	0.062	1.37
White-tailed Deer, *Odocoileus virginianus*	28	131.4	4	2.122	46.80
Unidentified Mammal	258	125.6	--	2.037	44.93
Birds					
Domestic Chicken, *Gallus gallus*	1	0.4	1	0.009	0.20
Passenger Pigeon, *Ectopistes migratorius*	3	0.6	1	0.013	0.29
Duck species, Anatinae	1	0.3	1	0.007	0.15
Unidentified Bird	15	4.1	--	0.074	1.63
Fish					
Unidentified Fish	1	0.1	--	--	--
Unidentified Vertebrata	1	0.1	--	--	--
Bivalves					
Unidentified Bivalves	1	0.3	--	--	--
Feature 6 Total	314	274.6	10	4.534	100.00
Feature 7					
Mammals					
Eastern Cottontail, *Sylvilagus floridanus*	1	0.2	1	0.005	0.02
Beaver, *Castor canadensis*	2	42.4	1	0.767	3.18
Porcupine, *Erethizon dorsatum*	1	0.6	1	0.017	0.07
Black Bear, *Ursus americanus*	2	25.2	1	0.480	2.00
Raccoon, *Procyon lotor*	9	20.3	3	0.395	1.64
Pig, *Sus scrofa*	1	1.2	1	0.031	0.13
cf. Wapiti or Elk, *Cervus elaphus*	1	4.6	--	0.104	0.43
White-tailed Deer, *Odocoileus virginianus*	108	948.8	9	12.574	52.20

Appendix C- continued

Taxon	NISP[1]	NISP Wt.(g)	MNI[2]	Biomass[3] (Kg)	Biomass %
Domestic Cattle, *Bos Taurus*	1	126.0	1	2.043	8.48
Unidentified Mammal	481	516.0	--	7.267	30.17
Birds					
Canada Goose, *Branta Canadensis*	1	2.8	1	0.053	0.22
Duck species, Anatinae	2	0.4	1	0.009	0.03
Wild Turkey, *Meleagris gallapavo*	2	7.6	1	0.129	0.54
Passenger Pigeon, *Ectopistes migratorius*	1	0.1	1	0.003	0.01
Unidentified Bird	8	4.4	--	0.079	0.33
Fish					
Lake Sturgeon, *Acipencer fulvescens*	1	0.1	1	0.005	0.02
Unidentified Fish	2	0.2	--	--	--
Reptiles					
Blanding's Turtle, *Emydoidea blandingii*	2	3.9	1	0.079	0.33
Semiaquatic pond turtles, Emydidae	4	1.8	--	0.047	0.20
Amphibians					
Frog/toad sp., Anura	1	0.1	1	--	--
Unidentified Vertebrata	717	63.4	--	--	--
Bivalves					
Spike, *Elliptio dilatata*	1	3.3	1	--	--
Unidentified Bivalves	3	4.4	--	--	--
Feature 7 Total	1362	1783.0	26	24.087	100.00
Feature 9					
Mammals					
Black Bear, *Ursus americanus*	1	10.7	1	0.222	21.43
White-tailed Deer, *Odocoileus virginianus*	3	44.2	1	0.796	76.83
Birds					
Ruffed Grouse, *Bonasa umbellus*	1	0.9	1	0.018	1.74
Feature 9 Total	5	55.8	3	1.036	100.00

BIBLIOGRAPHY

Arkush, B. S.

2000 Improving Our Understanding of Native American Acculturation through the Archaeological Record. In *Interpretations of Native North American Life: Material Contributions to Ethnohistory,* edited by M. S. Nassaney and E. S. Johnson, pp. 188-224. University Press of Florida, Gainesville, FL.

Baker, R. H.

1983 *Michigan Mammals.* Michigan State University Press, East Lansing.

Beaudry, M. C., L. J. Cook, and S. A. Mrozowski

1991 Artifacts and Active Voices: Material Culture as Social Discourse. In *The Archaeology of Inequality,* edited by R. H. McGuire and R. Paynter, pp. 150-191. Blackwell Publishers Inc., Malden, MA.

Beoku-Betts, J. A.

1995 We Got Our Way of Cooking Things: Women, Food, and Preservation of Cultural Identity among the Gullah. *Gender and Society* 9(5):535-555.

Bettarel, R. L. and H. G. Smith

1973 *The Moccasin Bluff Site and the Woodland Cultures of Southwestern Michigan.* Anthropological Papers No. 49. Museum of Anthropology, University of Michigan, Ann Arbor.

Biesele, M.

1993 *Women like Meat: The Folklore and Foraging Ideology of the Kalahari Ju/'hoan.* Witwatersrand University Press, Indianapolis, IN.

Bourdieu, P.

1977 *Outline of a Theory of Practice.* Translated by Richard Nice. Cambridge University Press, New York, NY.

1984 *Distinction: A social Critique of the Judgment of Taste.* Harvard University Press, Cambridge, MA.

Brumfiel, E. M.

1992 Distinguished Lecture in Archaeology. Breaking and Entering the Ecosystem- Gender, Class, and Faction Steal the Show. *American Anthropologist* 94: 551-567.

Cleland, C. E.

1966 *The Prehistoric Animal Ecology and Ethnozoology of the Upper Great Lakes Region.* Anthropological Papers No. 29. Museum of Anthropology University of Michigan, Ann Arbor.

1970 Comparison of the Faunal Remains from French and British Refuse Pits at Fort Michilimackinac: A Study in Changing Subsistence Patterns. *Canadian Historic Sites Occasional Papers in Archaeology and History* 3:3-23.

1982 The Inland Shore Fishery of the Northern Great Lakes: Its Development and Importance in Prehistory. *American Antiquity* 47(4):761-784.

Conkey, M. W. and J. M. Gero

1997 Programme to Practice: Gender and Feminism in Archaeology. *Annual Review of Anthropology* 26: 411-437.

Conkey, M. W. and J. D. Spector

1984 Archaeology and the Study of Gender. *Advances in Archaeological Method and Theory* 7: 1-38.

Cooper, E.

1986 Chinese Table Manners: You are How You Eat. *Human Organization* 45(2):179-184.

Counihan, C.

1992 Food Rules in the United States. *Anthropological Quarterly* 65(2):55-66.

Craib, I.

1992 *Anthony Giddens*. Routledge, London.

1998 *Experiencing Identity*. Sage, London.

Cremin, W. M.

1996 The Berrien Phase of Southwest Michigan. In *Investigating the Archaeological Record of the Great Lakes State: Essays in Honor of Elizabeth Baldwin Garland,* edited by M. B. Holman, J. G. Brashler and K. E. Parker, pp. 385-413. New Issues Press, Kalamazoo, MI.

Cremin, W. M. and M. S. Nassaney
1999 Background Research. In *An Archaeological Reconnaissance Survey to Locate Remains of Fort St. Joseph (20BE23) in Niles, Michigan,* edited by M. S. Nassaney, pp. 7-30. Archaeological Report No. 22, Department of Anthropology, Western Michigan University, Kalamazoo.

Dahlberg, K.
2001 Democratizing Society and Food Systems: Or How do We Transform Modern Structures of Power. *Agriculture and Human Values* 18(2):151-235.

Dice, L. R.
1943 *The Biotic Provinces of North America.* University of Michigan Press, Ann Arbor.

Douglas, M.
1966 *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo.* Praeger, New York, NY.

Evans-Pritchard, E. E.
1940 *The Nuer.* Oxford University Press, Oxford, UK.

Fantasia, R.
1995 Fast Food in France. *Theory and Society* 24(2):201-243.

Ferguson, P. P. and S. Zukin
1995 What's Cooking. *Theory and Society* 24(2):193-199.

Fine, G. A.
1995 Wittgenstein's Kitchen: Shared Meaning in Restaurant Work. *Theory and Society* 24(2):245-269.

Firth, R.
1936 *We, the Tikopia: A Sociological Study of Kinship in Primitive Polynesia.* Stanford University Press, Stanford, CA.

Fitting, J. E. and C. E. Cleland
1969 Late Prehistoric Settlement Patterns in the Upper Great Lakes. *Ethnohistory* 16(4): 289-302.

Friedmann, H.
1982 The Political Economy of Food: The Rise and Fall of the Postwar International Food Order. *The American Journal of Sociology* 88:248-286.

Gibbs L.

1987 Identifying Gender in the Archaeological Record: A Contextual Study. In *The Archaeology of Contextual Meanings,* edited by I. Hodder, pp. 79-89. Cambridge University Press, Cambridge, MA.

Grayson, D. K.

1978 Minimum Numbers and Sample Size in Vertebrate Faunal Analysis. *American Antiquity* 43(1):53-65.

1984 *Quantitative Zooarchaeology: Topics in the Analysis of Archaeological Faunas.* Academic Press, New York, NY.

2001 The Archaeological Record of Human Impacts on Animal Populations. *Journal of World Prehistory* 15(1):1-68.

Gums, B. L.

1988 Introduction. In *Archaeology at French Colonial Cahokia,* edited by B. L. Gums, pp. 1-27. Studies in Illinois Archaeology No. 3. Illinois Historic Preservation Agency, Springfield.

Gust, S. M.

1993 Animal Bones from Historic Urban Chinese Sites: A Comparison of Sacramento, Woodland, Tuscon, Ventura, and Lovelock. In *Hidden Heritage: Historical Archaeology of Overseas Chinese,* edited by P. Wegars, pp. 177-212. Baywood Publishing Co., Amityville, NY.

Hobsbawm, E.

1983 Introduction: Inventing Tradition. In *The Invention of Tradition,* edited by E. Hobsbawm and T. Ranger, pp. 1-14. Cambridge University Press, Cambridge.

Holtzman, J. D.

2003 *In a Cup of Tea: Commodities and History Among Samburu Pastoralists in Northern Kenya.* MS on file, Department of Anthropology, Western Michigan University, Kalamazoo.

Hulse, C. A.

1981 An Archaeological Evaluation of Fort St. Joseph (20BE23) Berrien County, Michigan. *The Michigan Archaeologist* 27(3-4):55-65.

Hunt, G. T.

1960 *The Wars of the Iroquois: A Study in Intertribal Trade Relations.* University of Wisconsin Press, Madison, WI.

Idle, D.

2003 *The Post of the St. Joseph River During the French Regime.* Fort St. Joseph Museum, Niles, Michigan. (Originally completed in 1946, Ph.D. Dissertation, Department of History, University of Illinois, Urbana).

Jelks, E. B., C. J. Ekberg, and T. J. Martin

1989 *Excavations at the Laurens Site: Probable Location of Fort de Chartres I.* Studies in Illinois Archaeology No. 5. Illinois Historic Preservation Agency, Springfield.

Kahn, M.

1986 *Always Hungry, Never Greedy: Food and the Expression of Gender in a Melanesian Society.* Waveland Press Inc., Prospect Heights, IL.

Keene, D.

1988 *Archaeological Excavations of Fort de Chartres: 1985-87.* MS on file, Illinois Historic Preservation Agency, Springfield.

Lynch, D. P.

2003 December. Personal Communication concerning pH results from Fort St. Joseph soils research.

2004 *A Geophysical Survey at Fort St. Joseph, Niles Michigan.* Paper presented at the Conference on Historical and Underwater Archaeology, St. Louis, MO.

Mann, R.

1999 The Silenced Miami: Archaeological and Ethnohistorical Evidence for Miami-British Relations, 1795-1812. *Ethnohistory* 46(3):399-427.

Martin, T. J.

1976 *A Faunal Analysis of Five Woodland Period Archaeological Sites in Southwestern Michigan.* Master's Thesis, Department of Anthropology, Western Michigan University, Kalamazoo.

1986 *A Faunal Analysis of Fort Ouiatenon, An Eighteenth Century Trading Post in the Wabash Valley of Indiana.* Ph.D. Dissertation, Department of Anthropology, Michigan State University, East Lansing.

1988 Animal Remains from the Cahokia Wedge Site. In *Archaeology at French Colonial Cahokia*, edited by B. L. Gums. Studies in Illinois Archaeology No. 3. Illinois Historic Preservation Agency, Springfield.

1991a Animal Exploitation Patterns in "Illinois Country": An Archaeological Perspective. In *The Living Museum*, pp. 38-40. vol. 53.

1991b Modified Animal Remains, Subsistence, and Cultural Interaction at French Colonial Sites in the Midwestern United States. In *Beamers, Bobwhites, and Blue-Points: Tributes to the Career of Paul W. Parmalee*, edited by J. R. Purdue, W. E. Klippel and B. W. Styles, pp. 409-419. vol. 23. Illinois State Museum Scientific Papers, Springfield.

Martin, T. J. and J. C. Richmond

2001 *Animal Remains from Wymer West Knoll (20BE132), A Mississippian Habitation Site in Berrien County, Michigan.* MS. on file. Quaternary Studies Program Technical Report, Illinois State Museum, Springfield.

Mason, R. J.

1986 *Rock Island: Historical Indian Archaeology in the Northern Lake Michigan Basin.* MCJA Special Paper 6. Kent State University Press, Kent, OH.

McGuire, R. H.

1982 The Study of Ethnicity in Historical Archaeology. *Journal of Anthropological Archaeology*. 1: 159-178.

Meigs, A.

1988 Food as Cultural Construction. *Food and Foodways* 2:341-357.

Meskell, L.

2002 Archaeologies of Identity. In *Archaeological Theory Today,* edited by I. Hodder, pp. 187-213. Blackwell Publishers Inc., Malden, MA.

Messer, E.

1984 Anthropological Perspectives on Diet. *Annual Review of Anthropology* 13:205-249.

Mintz, S.

1985 *Sweetness and Power: The Place of Sugar in Modern History.* Penguin, New York, NY.

Nassaney, M. S.

2001 *Social Archaeology*. M.S. on file, Department of Anthropology, Western Michigan University, Kalamazoo.

2003 Proposal: *National Endowment for the Humanities Collaborative Research.* M.S. on file. Department of Anthropology, Western Michigan University, Kalamazoo.

Nassaney, M. S., W. M. Cremin, J. A. Brandao, D. Lynch, R. Becker, and B. Giordano

2004 The Archaeological Discovery of Fort St. Joseph (20BE23), A French Mission-Garrison-Trading Post Complex in Niles, Michigan. In *New Perspectives on French Heritage: French Settlements and Culture in North America and the Caribbean*, edited by E. Scott, University of Florida Press, Gainesville, FL. (in press)

Nassaney, M. S., W. M. Cremin, R. Kurtzwell, and J. A. Brandao

2003 The Search for Fort St. Joseph (1691-1781) in Niles, Michigan. *Midcontinental Journal of Archaeology* 28(2): 107-144.

O'Connor, T.

2000 *The Archaeology of Animal Bones.* Texas A&M University Press, College Station, TX.

Olsen, S. J.

1971 Zooarchaeology. In *A McCaleb Module in Anthropology*. Florida State University, Gainesville.

Orlove, B. and E. Schmidt

1995 Swallowing their Pride: Indigenous and Industrial Beer in Peru and Bolivia. *Theory and Society* 24(2):271-298.

Parmelee, P. W.

1985 Identification and Intepretation of Archaeologically Derived Animal Remains. In *The Analysis of Prehistoric Diets*. Academic Press Inc.

Paynter, R. and R. H. McGuire

1991 The Archaeology of Inequality: Material Culture, Domination, and Resistance. In *The Archaeology of Inequality,* edited by R. H. McGuire and R. Paynter, pp. 1-27. Blackwell Publishers Inc., Malden, MA.

Peyser, J. L.

1978 *The Fort St. Joseph Manuscripts: Chronological Inventory and Translations*. Niles Public Library, Niles, MI.

Reitz, E. J., I. R. Quitmyer, H. S. Hale, S. J. Scudder and E. S. Wing

1987 Application of Allometry to Zooarchaeology. *American Antiquity* 52(2):304-317.

Reitz, E. J. and C. M. Scarry
1985 *Reconstructing Historic Subsistence with an Example from Sixteenth-Century Spanish Florida*. Society for Historical Archaeology Special Publication No. 3.

Scott, E. M.
1985 *French Subsistence at Fort Michilimackinac: The Clergy and the Traders*. Mackinac Island State Park Commission.

1991 A Feminist Approach to Historical Archaeology: Eighteenth-Century Fur Trade Society at Michilimackinac *Historical Archaeology* 25(4) 42-53.

Shanks, M. and C. Tilley
1982 Ideology, Symbolic Power and Ritual Communication: A Reinterpretation of Neolithic Mortuary Practices. In *The Archaeology of Contextual Meanings,* edited by I. Hodder, pp. 129-154. Cambridge University Press, Cambridge, MA.

Shennan, S. (editor)
1994 *Archaeological Approaches to Cultural Identity.* Routledge, London.

Sleeper-Smith, S.
2001 *Indian Women and French Men: Rethinking Cultural Encounters in the Western Great Lakes*. University of Massachusetts Press, Amherst, MA.

Tordoff, J. D.
1983 *An Archaeological Perspective on the Organization of the Fur Trade in Eighteenth Century New France.* Ph.D. Dissertation, Department of Anthropology, Michigan State University, East Lansing.

Ulin, R.
1995 Invention and Representation as Cultural Capital: Southwest France Winegrowing History. *American Anthropologist* 97(3):519-527.

1996 *Vintages and Traditions: An Ethnohistory of Southwest French Wine Cooperatives*. Smithsonian Institution Press, Washington, D.C.

Walthall, J. A. (editor)
1991 *French Colonial Archaeology: The Illinois Country and Western Great Lakes.* edited volume. University of Illinois Press, Urbana.

Welch, P. D. and C. M. Scarry
1995 Status-Related Variation in Foodways in the Moundville Chiefdom. *American Antiquity* 60(3):397-419.

White, R.
1991 *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815*. Cambridge University Press, Cambridge, MA.

Wise, S.
2001 *An Examination of Social Identity and Material Culture in French Colonial North America.* Master's Thesis, Department of Anthropology, Western Michigan University, Kalamazoo.

Wylie, A.
1991 Gender Theory and the Archaeological Record: Why is there no Archaeology of Gender. In *Engendering Archaeology: Women and Prehistory,* edited by J. M. Gero and M. W. Conkey, pp. 31-54. Blackwell Publishers Inc., Malden, MA.